



Quality Matters in Early Childhood Education and Care

FINLAND

Miho Taguma, Ineke Litjens and Kelly Makowiecki



Quality Matters in Early Childhood Education and Care: Finland 2012

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and Kelly Makowiecki



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FOREWORD

This publication is intended to be a quick reference guide for anyone with a role to play in encouraging quality in Finland's early childhood education and care (ECEC) workforce.

There is a growing body of evidence that children starting strong in their learning and well-being will have better outcomes when they grow older. Such evidence has driven policy makers to design an early intervention and re-think their education spending patterns to gain “value for money”. At the same time, research emphasises that the benefits from early interventions are conditional on the level of “quality” of ECEC that children experience.

What does “quality” mean? *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care* has identified five policy levers that can encourage quality in ECEC, having positive effects on early child development and learning.

- Policy Lever 1: Setting out quality goals and regulations
- Policy Lever 2: Designing and implementing curriculum and standards
- Policy Lever 3: Improving qualifications, training and working conditions
- Policy Lever 4: Engaging families and communities
- Policy Lever 5: Advancing data collection, research and monitoring

Of the five policy levers, Finland has selected **Policy Lever 3: Improving Qualifications, Training and Working Conditions** for its current policy focus.

This policy profile for Finland would not have been possible without the support of the national authority and the stakeholders involved. The OECD Secretariat would like to thank the national co-ordinators, Tarja Kahiluoto, Päivi Lindberg, Maiju Paananen, Anna Mikander, Hely Parkkinen, Kirsti Karila and Mikko Ojala, for their work in providing information. We would also like to thank all those who gave their time to respond to our many questions, provide comments on preliminary drafts and validate the information for accuracy. We would also like to thank consultants Janice Heejin Kim and Matias Egeland who worked on sections of the preliminary drafts as part of the OECD team on ECEC.

The online version of the quality toolbox can be found at: **www.oecd.org/edu/earlychildhood/toolbox**. The online toolbox has additional information, such as a country materials page where actual documents from OECD countries are presented, including curricula, regulatory frameworks and data systems information. All information related to the OECD Network on ECEC is available at: **www.oecd.org/edu/earlychildhood**.

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EXECUTIVE SUMMARY

ECEC is a topic of increased policy interest in Finland where improving quality in the ECEC sector is a subject of growing importance. One of the aspects that matters most for the level of quality of ECEC provision is the adults who work with young children in preschool education, *i.e.*, the ECEC workforce. Well-educated, well-trained professionals are the key factor in providing high-quality ECEC with the most favourable cognitive and social outcomes for children. It is, however, not the qualification *per se* that has an impact on child outcomes but the *ability* of better educated and trained staff to create a high-quality pedagogical environment that makes the difference. Research suggests that pedagogical quality includes:

- A good understanding of child development;
- The ability to develop children’s perspectives, praise, comfort, question, be responsive, and elicit children’s ideas;
- Skills for leadership, problem solving and development of lessons plans; and
- Good vocabulary.

Well-educated/trained staff is better able to create more effective work environments and increase the efficiency of other ECEC staff members while ongoing professional training maintains the benefits from initial education and allows staff to stay updated on professional developments and best practices, contributing to improved pedagogical and professional quality, and stimulating early child development. Additionally, the ability of staff to provide high-quality care and education is influenced by their working conditions, such as salary and non-financial benefits.

Working conditions have an impact on staff job satisfaction, their ability to carry out their tasks, and their possibilities to positively interact with children and stimulate early development. Staff that are happy in their job provide better care and education than unsatisfied practitioners, and this also leads to lower staff turnover rates. When staff provision is stable (*i.e.*, low staff turnover rate), professionals are better able to develop close relationships with children and provide nurturing stimulating interactions, resulting in more safe, healthy and high-quality learning environments and improved child development.

Policy outcomes and inputs

Regarding the indirect or direct outcomes and results of Finland’s ECEC policies, Finland performs above the OECD average on most outcomes: the country’s fertility rates are slightly higher than in most other OECD countries; Finnish students at the age of 15 perform well on PISA assessments for reading, mathematics and science; and there is very little child poverty. Besides this, school survival rates are high; young people (15 to 19 years) are most often either in school or work; and maternal employment rates are in line with the average or above. The exceptions on which Finland scores below the average are: enrolment rates in ECEC for under-three-year-olds, three-year-olds and five-year-olds; healthy weight rates among 15-year-olds; and gender equality in median earnings.

Also regarding inputs, *i.e.*, the policies in place that can affect Finland’s ECEC workforce quality and the outcomes, Finland performs mostly above the OECD average. Finland has above-average public spending levels on child care and education for three- and five-year-

olds; a higher than average public spending level on ECEC services directly (in-kind spending); longer than average paid paternity leave entitlements; high minimum qualification requirements for staff in educating positions in ECEC provisions; and a very favourable staff to child ratio in ECEC. However, Finland has a below-average public expenditure level on family cash benefits and tax credits and a shorter than average paid maternity leave entitlement.

Strengths of the Finnish ECEC workforce and areas for reflection

Based on Finland's responses to the questionnaires of the OECD ECEC Network, as well as the Survey for the Quality Toolbox and ECEC Portal, several strengths and areas for reflection have been identified. The main strengths of Finland's ECEC workforce are related to staff preparation, the nature of professional development, and staff working conditions. Possible areas for reflection are mostly related to furthering knowledge and skills of staff, licensing of the professionals, and workforce supply.

Strengths

- Initial qualifications and education: Firstly, as indicated above, Finland has high qualifications for ECEC teaching staff: they need at least a diploma equal to ISCED level 5, which is also the case in New Zealand and Sweden. Staff in the ECEC sector with caring responsibilities have a lower minimum qualification requirement (ISCED level 3), which is similar to most other OECD countries, including New Zealand and Sweden. Additionally, the initial education provision for ECEC workers is broad in Finland: students can participate in education programmes on a part-time or full-time basis, and they are provided by public, as well as private, training provisions. It is only provided publically in Sweden and for educational staff in New Zealand. Private provision of initial education is only available for play centre leaders in New Zealand. The Finnish education programmes for care professionals and teaching professionals are aligned.
- Professional development: Participation in professional development is mandatory for ECEC staff, and the costs of such training are shared between the government, employer and the individual, ensuring that staff do not bear the full cost. Professional development is not mandatory in New Zealand and Sweden. Professional development opportunities are provided by a range of providers including the government, employer, schools and non-governmental institutions. They provide training in a variety of formats, ranging from seminars and workshops to onsite mentoring and formal training courses; and the development opportunities address topics including, among others, curriculum, monitoring, health, communication and educational transitions. Several incentives are in place for staff, in addition to the mandatory nature of participation, to encourage uptake of professional development. These incentives include financial support to cover training costs; financial support to cover partial salary; the possibility to obtain a higher qualification; and permission for study leave. However, Finland does not necessarily promote or increase staff salary when professionals participate in training as New Zealand does.
- Working conditions: The recommended maximum number of children per ECEC professional in Finland is among the most favourable in the OECD (1:4 for zero-to-three-year-olds; 1:7 for older children in ECEC; and 1:4 in family day care), which provides staff with greater possibilities for close interaction and intensive care for the children. New Zealand has less favourable minimum ratio standards, while Sweden has no minimum standards in place.

Areas for reflection

- **Licensing:** Finland has no licensing renewal requirements in place, whereas staff in New Zealand must renew their licence every three years. Renewal of licences can contribute to identifying development or training needs and ensuring a high-quality workforce supply.
- **Furthering knowledge and skills of staff:** ECEC staff in Finland face challenges in developing leadership skills and competences, which are found to be of great importance in implementing curriculum and stimulating child development. Also, having good computer skills is becoming more important since the use of computers is increasingly rapidly in schools, in the workplace and in the home environment. Lastly, since the immigrant population in Finland doubled between 1990 and 2012, it is increasingly important for staff to have good knowledge of the mother tongue language in order to teach it to young children, and to have a great understanding and respect for other cultures. The latter is strongly emphasised in New Zealand's ECEC curriculum framework and in training for staff in Sweden.
- **Workforce supply:** Recruiting a more diverse, young workforce and recognising skills and competences prior to becoming an ECEC professional is a possible area for reflection in Finland. As in many OECD countries, including New Zealand and Sweden, Finland's ECEC workforce is highly female, and the majority is above the age of 40. Additionally, in Finland, New Zealand and Sweden, there are very few incentives to recognise prior learning (RPL) or skills and competences obtained prior to the formal initial education of ECEC professionals. Recognition of previously obtained skills or knowledge can be used for up skilling, recruitment and qualifying the unqualified, thus making the sector more attractive.

Implementation challenges and strategies

Many countries are facing implementation-related challenges in improving the ECEC workforce. Based on the Survey for the Quality Toolbox and ECEC Portal, five common challenges have been identified: 1) improving staff qualifications; 2) securing a high-quality workforce supply; 3) retaining the workforce; 4) workforce development; and 5) managing the quality of workforce in private ECEC provision. Finland has already made several efforts in tackling these challenges. Most strategies focus on developing the workforce and improving staff qualifications. New Zealand and Sweden have also implemented a range of strategies to tackle these challenges:

- **Improving qualifications:** Finland merged different examinations for staff with different responsibilities; aligned qualifications between pre-primary and primary teachers; and revised the curriculum for initial practical nurse training.
New Zealand revised the initial education programmes and developed new qualifications for working in the ECEC sector; ensures that qualifications cover key competences relevant for early child development in the country's cultural context; set graduating teaching standards for preschool teachers; and reviews initial education qualifications when needed.
Sweden developed new degrees for ECEC staff and set the same training requirements for staff and managers to improve qualifications for the ECEC sector.
- **Securing a high-quality workforce:** Finland has set minimum qualification standards for ECEC staff and management and diversifies the workforce by having staff with different educational backgrounds.

New Zealand provides grants and scholarships for students and professionals wishing to work in ECEC; provides funding to initial education programmes in minority services; validates existing competences; and provides support to allow for easier access to the profession. A career in ECEC is promoted as is workforce mobility between different regions and even countries. New Zealand has an induction process for new staff in which mentors help newly graduated professionals during the first two years on the job. Additionally, the government stimulates providers to hire highly qualified staff by providing financial support.

- **Retaining workforce:** To retain workforce, Finland has increased the status of family day care to other forms of ECEC and provides several career opportunities for professionals.

New Zealand gives pay parity to preschool and primary school teaching staff to make the sector more attractive; the government assists in negotiating for working conditions in the sector; relocation grants and return to teaching allowances are provided for staff willing to work in areas with high shortages of staff; and practical support is provided for staff and management to guide them in their work.

Sweden funded the improvement of staff-child ratios to improve staff working conditions; provides promotion possibilities to preschool teachers; and developed support materials and guidelines for staff, heads of preschools and municipality management.

- **Developing the workforce:** To ensure ECEC professionals remain up-to-date on their knowledge and skills and improve their competences, continuous training has been made a requirement in Finland. The country focuses on quality enhancement in professional development; emphasises the importance of continuous training to staff and ECEC managers; designs training based on demand; recognises the need for diversity training; offers training on curriculum implementation; contributes to financing training costs; and establishes partnerships between parents and staff to increase staff knowledge on child development.

In New Zealand, it is a requirement for all staff to have access to professional development opportunities; action on leadership development is being promoted; training focuses staff needs; a professional development programme focusing on leadership has been implemented; institutions receive funding for providing continuous training for teachers working with minority or disadvantaged children; practical support kits for leadership positions have been developed; and a self-evaluation tool for staff to support quality improvement has been developed.

Sweden also focuses training on staff needs, such as language development. Additionally, the government funded a programme focusing on improving staff competences and, similar to New Zealand, has a self-evaluation tool for staff.

- **Managing the quality of workforce in different ECEC provisions:** Finland regulates private and public ECEC provisions to manage the quality of the provisions as well as the quality of the workforce. Finland also assesses the educational and developmental needs of staff in different ECEC provisions to ensure they are being trained according to their needs.

New Zealand monitors the quality of the workforce through the renewal of licences every three years. New Zealand also assesses staff needs in minority-oriented services to ensure a quality workforce in those provisions.

Sweden systematically evaluates quality in ECEC to obtain knowledge of the level of preschool quality, including workforce, staff needs and competences.

INTRODUCTION

Aim of the policy profile

Early childhood education and care (ECEC) has become a policy priority in many countries. A growing body of research recognises that it provides a wide range of benefits, including social and economic benefits, better child well-being and learning outcomes as a foundation for lifelong learning, more equitable outcomes and reduction of poverty, and increased intergenerational social mobility. But these positive benefits are directly related to the “quality” of ECEC.

Definitions of quality differ across countries and across different stakeholder groups depending on beliefs, values, a country’s (or region’s) socio-economic context, and the needs of the community of users. While definitions should be interpreted with caution and sensitivity when comparing cross-country practices, the OECD has taken a two-tier approach to defining “quality” to proceed policy discussions. Therefore, this policy profile considers quality in terms of “structural quality”¹ and “process quality”², and sets out “child development or child outcomes” as quality targets.

Based on international literature reviews findings, the OECD has identified five levers as key policies to encourage quality in ECEC:

- 1) Quality goals and minimum standards
- 2) Curriculum and pedagogy
- 3) Workforce qualifications, education and training, and working conditions
- 4) Family and community engagement
- 5) Research, monitoring and evaluation

Of the five levers, Finland has selected “workforce qualifications, education and training, and working conditions” to be the theme of its policy profile. As reference countries in focus for international comparison, Finland has selected New Zealand and Sweden.

Structure of the report

This report consists of four chapters:

Chapter 1: Where does Finland stand regarding policy outcomes and inputs?

The first chapter presents two spider webs that give an overview of: 1) policy outcomes over the lifecycle of a child, such as participation rates in ECEC, PISA performance scores and labour market outcomes; 2) policy inputs, which indicate what policies are in place that can influence ECEC and workforce development, such as working conditions (staff-child ratio), parental leave policies and public spending on ECEC.

The spider webs can show where your country stands against the OECD average and can draw attention to areas (outcomes and inputs) that might require more policy attention.

Chapter 2: What does research say?

This chapter aims to help you to brief political leaders, stakeholders and the media about the latest research and explain why workforce quality and working conditions matter for better child development. It includes an overview of research findings on why qualifications and training and development matter, what the effects of workforce-related aspects are on child development and the quality of ECEC provision, which aspects matter in workforce development and working conditions, policy implications from research, and knowledge gaps in current research.

Chapter 3: Where does Finland stand compared to other countries?

Chapter three provides an international comparative overview of where your country stands regarding the education and training of staff as well as working conditions. It identifies the strengths and areas for reflection for Finland in comparison with the selected reference countries. The chapter can provide an insight as to which aspects of workforce development Finland might consider taking policy action on, and it can raise awareness about policy issues.

Chapter 4: What are the challenges and strategies?

Chapter four presents the challenges countries have faced in improving workforce development and working conditions and gives alternative approaches to overcome these challenges. This chapter provides a quick overview of what New Zealand and Sweden have done in tackling challenges in improving the quality of the workforce.

NOTES

- 1 Structural quality consists of ‘inputs to process-characteristics which create the framework for the processes that children experience’. These characteristics are not only part of the ECEC location in which children participate, but they are part of the environment that surrounds the ECEC setting, *e.g.*, the community. They are often aspects of ECEC that can be regulated, though they may contain variables which cannot be regulated (Litjens and Taguma, 2010).
- 2 Process quality consists of what children actually experience in their programmes – that which happens within a setting. These experiences are thought to have an influence on children’s well-being and development (Litjens and Taguma, 2010).

CHAPTER 1

WHERE DOES FINLAND STAND REGARDING POLICY OUTCOMES AND INPUTS?

In general, Finland performs above the OECD average with most of the ECEC outcome indicators. On socio-demographic and labour market outcomes, the fertility rates are slightly higher than the average countries; and maternal employment rates are in line with the average or above. On child outcome indicators, there is very little child poverty; Finnish students at the age of 15 perform well on PISA assessments for reading, mathematics and science; school survival rates are high; and young people (15 to 19 years) are most often either in school or work. Areas for reflection on possible policy change with an international comparative perspective include: improving gender equality in earnings for women; increasing ECEC enrolment rates for children at ages three and five; and improving health outcomes for students at age 15.

On policy input indicators, Finland performs well on many of the ECEC quality-related indicators, such as staff-child ratio for zero-to-three-year-olds and three-to-six-year-olds, and the level of qualification of staff with teaching responsibilities. However, the qualification level of staff with caring responsibilities is lower than for those with teaching responsibilities. Finland could consider enhancing the quality of the workforce with caring responsibilities.

In recent years, the underpinning principles for policy intervention are shifting from a current-income, social-welfare model to a life-cycle, human capital development model. In the life-cycle model, ECEC is considered to play a critical role.

A growing body of research suggests that ECEC generates a higher rate of return on public intervention than later stages of education, and even more so for disadvantaged children. It argues that ECEC lays the foundation for subsequent stages in life, such as better student performance, less poverty, more equitable outcomes, less dropouts and greater labour market success.

From a labour market perspective, it is argued that access to affordable, quality ECEC permits mothers to take an equal place in the workforce, boosting household income and giving some families vital help out of poverty. It is also argued that this will also improve female workforce participation, increasing the tax base for the society in general.

The first Spider Web Chart (Figure 1.1) aims to spotlight the **policy outcomes** of your country with a life-cycle approach. This is presented in comparison with the OECD average and the highest scored country (at the maximum value of 100) and the lowest scored country (at the minimum value of 0). *First*, the tool can help you to see where your country stands against international standards. *Second*, it can imply which outcomes might require more policy attention from an international comparison perspective, independent of domestic policy discussions. *Third*, it can set the scene for you to reflect upon how your country's selected quality focus could help improve the target outcomes.

The second Spider Web Chart (Figure 1.2) aims to spotlight the **inputs** from ECEC policy. This tool can help you to compare how your country's positioning on the outcomes in the international landscape relates or does not relate to that on the input side. It can also help you to understand that your country's selected quality focus is part of a policy package, which can, if planned well – in combination with other policy interventions – avoid cancelling out effects.

In the Annexes, Finland is compared with not only other OECD countries but, in particular, with the reference countries selected by Finland wherever the comparative data are available. The selected countries are Sweden and New Zealand.

Spider web chart on policy outcomes

On the selected policy outcome indicators across different sectors, Finland performs above the average on most indicators. The exceptions are: enrolment rates in ECEC for under-three-year-olds, three-year-olds and five-year-olds; healthy weight rates among 15-year-olds; and gender equality in median earnings (Figure 1.1). A more detailed comparison and additional information can be found in Annex B.

On fertility rates

- Fertility rates in Finland are slightly above the OECD average. Finland is one of the few OECD countries in which fertility rates have not decreased since 1995.

On participation and outcomes in child well-being and learning

- ECEC participation: Enrolment rates in ECEC for all age categories are below the OECD average. The ECEC enrolment rate for five-year-olds is one of the lowest among OECD countries.

- Finnish students perform well above the OECD average on all PISA assessments, including reading, mathematics and science. Regarding PISA science, Finland has the highest score of all OECD countries. On reading and mathematics, only Korean students outperform Finnish students.
- The share of 0-to-18-year-olds living above the poverty line in Finland is higher than the average, although it has a below-average proportion of 15-year-olds with healthy weight.

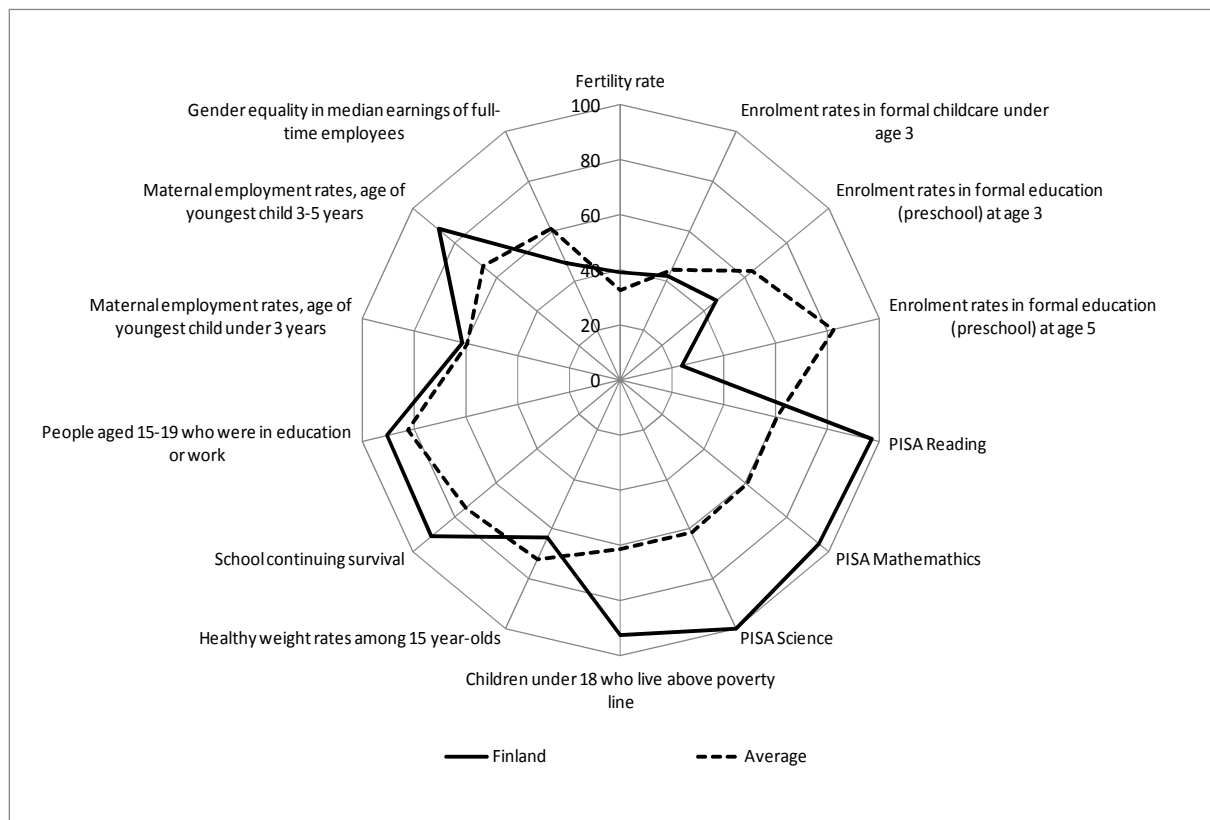
On youth participation in education or employment

- Finland has among the highest school survival rates. This indicates that most young people after finishing lower secondary education continue their educational path in higher secondary education or start training.
- Finland also has a large proportion of 15-to-19-year-olds either in education or work. Not many young people in Finland face the challenge of not attending any form of education or not having a job.

On labour market outcomes for women and gender equality in earnings

- Employment rates of Finnish mothers with a child under the age of three are similar to the OECD average. When children grow older, maternal employment rates increase: mothers with three-to-five-year-old children have high employment rates in Finland.
- Finland scores below the OECD average regarding gender equality in full-time earnings, which indicates that there is a larger gender pay gap between men and women than in many other OECD countries.

Figure 1.1. An overview of policy outcomes across sectors



Note: For each indicator, the absolute performance is standardised (normalised) using a normative score ranging from 0 to 100, where 100 was set at the maximum value and 0 was set at the minimum value, taking into account all OECD countries with available data in each case. The average is calculated by taking into account all OECD countries with available data. See Table 1.1 for maximum and minimum value countries.

Source: See Annex B for sources.

Table 1.1. Value for Finland, maximum value and minimum value on the policy outcomes spider web chart

Indicator on child outcomes	Value for Finland	Minimum value	Maximum value
Fertility rate (2009 or latest year available)	1.86	Korea (1.15)	Israel (2.96)
Enrolment in formal care for the under 3s (%) (2008)	28.6	Czech Republic (2.2)	Denmark (65.7)
Enrolment rates at age 3 (%) (2009)	46.1	Netherlands (0.05)	France (100)
Enrolment rates at age 5 (%) (2009)	62.6	Turkey (50.9)	Australia; France; Ireland; Mexico; New Zealand (100)
PISA (Programme for International Student Assessment) Reading (Score) (2009)	536	Mexico (425)	Korea (539)
PISA Mathematics (Score) (2009)	541	Mexico (418)	Korea (546)
PISA Science (Score) (2009)	554	Mexico (415)	Finland (554)
Children under 18 above poverty line (%) (2006 or latest year available)	94.6	Israel (73.4)	Denmark (96.3)
Healthy weight rates among 15-year-olds (%) (2009 or latest year available)	63.6	United States (70.5)	Slovak Republic (92.5)
School continuing survival (% of the population aged 18-24 in further education or training) (2007)	92	Turkey (52.8)	Slovenia (95.8)
People aged 15-19 who were in education or work (%) (2008)	5.1	Turkey (2.1)	Netherlands (33.1)
Maternal employment rates, age of youngest child under 3 years old (2008 or latest year available)	51.8	Hungary (15.5)	Slovenia (74.6)
Maternal employment rates, age of youngest child 3-5 years old (2008 or latest year available)	76	Turkey (21.4)	Iceland (83.6)
Gender equality in median earnings of full-time employees (2008 or latest year available)	78.8	Korea (61.2)	Italy (98.7)

Spider web chart on policy inputs

On the selected policy indicators, Finland performs close to or above the OECD average on almost all indicators. The only three indicators on which Finland has a below average score are public spending on family benefits and tax measures to support families in coping with the costs of ECEC and child-rearing; paid maternity leave; and required ISCED level for staff at the care sector (Figure 1.2). A more detailed comparison and additional information can be found in Annex C.

On public spending on young children

- Finland has different public expenditure portfolios for different age groups and for different services.
 - The level of public expenditure on **child care and education at age three and age five**, as a percentage of median working-age household income, is above the OECD average in Finland. This indicates high public spending levels on ECEC for three- and five-year-old children in Finland compared with other OECD countries.
 - Regarding public expenditure on **family cash benefits and tax credits** as a percentage of GDP in 2007, Finland has a lower than average expenditure level. However, the public spending level on delivering services or funding services directly (ECEC) is well above the average.

On parental leave

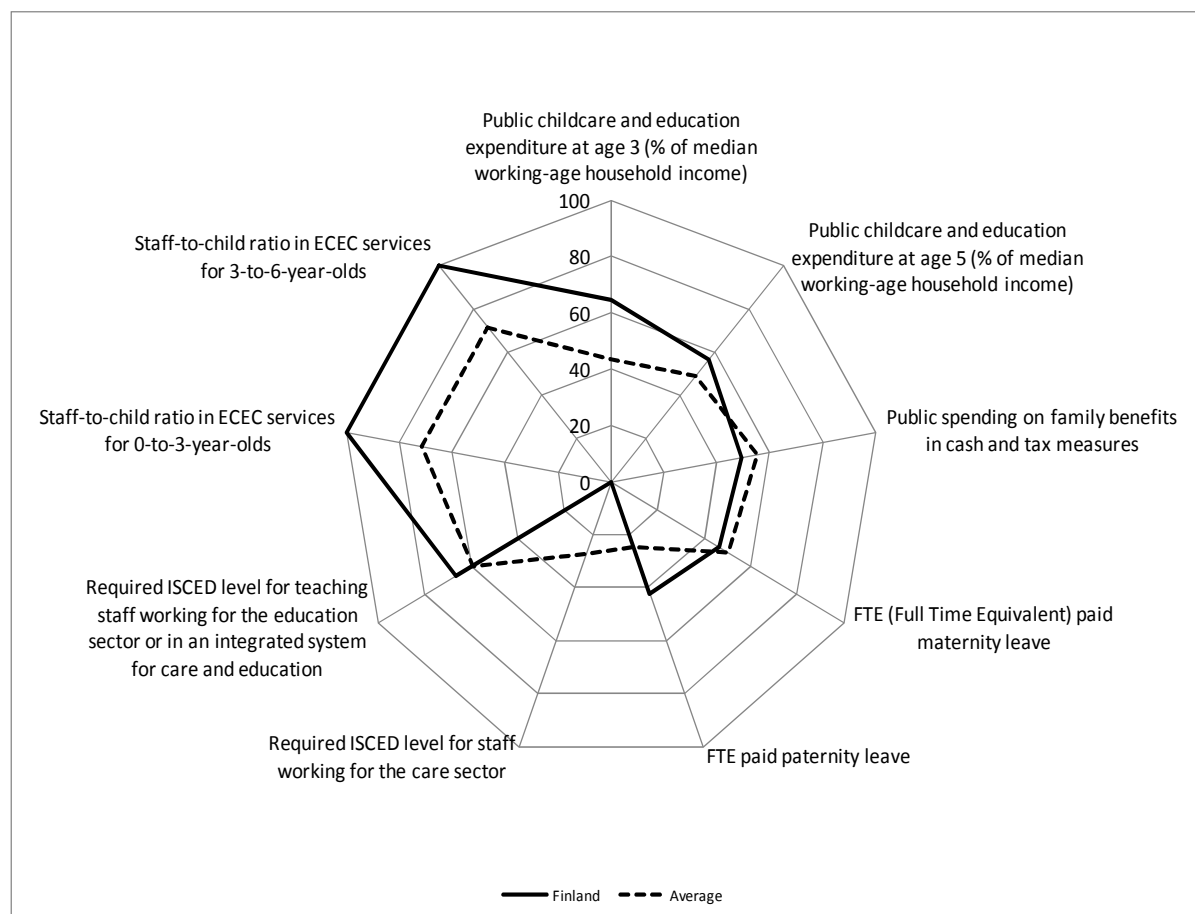
- Finland scores below the OECD average regarding paid maternity leave entitlements, while paid paternity leave entitlements are longer than the OECD average.

On staff qualification

- Finland requires ISCED level 3 for staff working in caring positions, which is most common among the OECD countries. However Finland sets minimum ISCED level 5, above the international average, for staff working in education positions.

On regulated staff-child ratio

- Finland has the best staff-child ratio in ECEC services for zero-to-three-year-olds as well as in ECEC services for three-to-six-year-olds. ECEC staff look after the fewest children among the OECD countries.

Figure 1.2. An overview of policy inputs

Note: For each indicator, the absolute performance is standardised (normalised) using a normative score ranging from 0 to 100, where 100 was set at the maximum value and 0 was set at the minimum value, taking into account all OECD countries with available data in each case. The average is calculated by taking into account all OECD countries with available data. For staff-to-child ratio, all jurisdictions and regions are included in calculation of the total average. See Table 1.2 for maximum and minimum value countries.

Source: See Annex C for sources.

Table 1.2. Value for Finland, maximum value and minimum value on the policy inputs spider web chart

Indicator on policy inputs	Value for Finland	Minimum value	Maximum value
Public child care and education expenditure at age 3 (% of median working-age household income) (2007)	28.8	Switzerland (2.3)	Sweden (43.4)
Public child care and education expenditure at age 5 (% of median working-age household income) (2007)	29.1	Slovenia (5.9)	Hungary (46.9)
Public spending on family benefits in cash and tax measures (% of GDP) (2007)	1.4	Korea (0.2)	Luxembourg (2.6)
FTE (Full Time Equivalent) paid maternity leave (weeks) (2006/07)	11.9	Australia; United States (0)	Greece (25.4)
FTE paid paternity leave (weeks) (2006/07)	4.9	Chile; Estonia; Ireland (0)	Germany (11.59)
Required ISCED level for staff working in caring positions or the child care sector (2011)	3	Belgium; Czech Republic; Finland; Germany; Hungary; Korea; Mexico; Netherlands; New Zealand; Norway; Poland; Slovak Republic; Slovenia; Sweden (3)	Israel; Italy; Japan; Spain; United Kingdom (5)
Required ISCED level for teaching staff in ECEC (2011)	5	Czech Republic; Slovak Republic (3)	Italy (6)
Staff-to-child ratio in formal day care services/ for 0-to-3-year-olds (2011)	1:7	Georgia (USA) (1:17)	Finland (1:7)
Staff-to-child ratio in pre-school services/ for 3-to-6-year-olds (2011)	1:4	Japan (1:35)	Finland (1:4)

CHAPTER 2

WHAT DOES RESEARCH SAY?

Staff qualifications, initial education and professional development contribute to enhancing pedagogical quality, which is – ultimately – highly associated with better child outcomes. It is not the qualification per se that has an impact on child outcomes but the ability of better qualified staff members to create a high-quality pedagogic environment. Key elements of high staff quality are the ways in which staff involve children, stimulate interaction with and between children, and use diverse scaffolding strategies.

Research has shown that working conditions can also improve the quality of ECEC services: better conditions will improve staff job satisfaction and retention. This will influence staff behaviour, encouraging more stable, sensitive and stimulating interactions with children, and thus, lead to better child development. Research has pointed to certain conditions that can impact the quality of ECEC services: i) high staff-child ratio and low group size; ii) competitive wages and other benefits; iii) reasonable schedule/workload; iv) low staff turnover; v) a good physical environment; and vi) a competent and supportive centre manager.

This chapter includes two research briefs:

- Workforce qualifications, education, and training; and
- Working conditions.

WHY DO WORKFORCE QUALIFICATIONS, EDUCATION AND TRAINING MATTER FOR BETTER CHILD DEVELOPMENT?

What are “qualifications, education and professional development” in ECEC?

ECEC qualifications indicate the recognised level and types of knowledge, skills and competencies that ECEC staff have received.¹ Formal education in ECEC refers to the level and type of education that ECEC staff pursue to acquire such knowledge, skills and competencies to work in the sector. Professional development provides opportunities for staff who are already working in the sector to update or enhance their practices; it is often referred to as “in-service training”, “continuous education” or “professional training”.

What is at stake?

Recent social changes have challenged traditional views of childhood and child rearing: 1) the changing socio-economic role of women, 2) growing ethnic diversity of developed countries, and 3) changing views on (early) education and the purpose of (early) education. The last two changes have important consequences for what is expected of those who work with young children.

As pointed out by the OECD teachers’ review (OECD, 2005), education systems need to invest in intensive teacher education and training if teachers are to deliver high-quality outcomes. This also refers to the ECEC sector (OECD, 2006). Specific knowledge, skills and competencies are expected of ECEC practitioners. There is a general consensus, supported by research, that well-educated, well-trained professionals are the key factor in providing high-quality ECEC with the most favourable cognitive and social outcomes for children. Research shows that the behaviour of those who work in ECEC matters and that this is related to their education and training. The qualifications, education and training of ECEC staff are, therefore, an important policy issue (OECD, 2006).

In spite of the consensus on the importance of well-trained staff, governments often fear the funding consequences of raising staff qualifications. Higher qualifications can be followed by increased wage demands, which, in turn, contribute significantly to the costs of services. Although the evidence is strong that improved training and qualification levels raise the quality of interaction and pedagogy in ECEC services – and similar evidence exists in favour of staff qualifications – governments often choose not to invest in raising qualifications or funding staff training (OECD, 2006). This might seriously affect ECEC quality, and with this, child development outcomes, since staff are not being optimally trained or educated to stimulate early learning and development.

Although research emphasises the high relevance of adequate staff initial education and continuous professional development opportunities, large differences occur between countries in terms of which qualifications are being asked of ECEC practitioners. Opportunities to participate in professional development and in-service training also vary greatly across countries and between education and child care in split systems. The

qualification requirements vary from no formal education at all to a specialised bachelor's or even master's degree, and professional development and training ranges from being compulsory to being based on voluntary will in combination with no additional funding for training (OECD, 2006).

Often there is a difference between the qualifications required to work with very young children (up to three or four years of age) and the qualifications needed to be a teacher for children age four to primary school age. This is especially the case in countries with a so-called split system: children ages zero to three or four attend different ECEC institutions (often day care services) than those ages three or four to primary schooling age, who more regularly attend pre-primary services. In countries with an integrated system where all young children (age zero to primary school age) attend the same centres, all practitioners usually have to meet the same requirements in terms of education and training (Eurydice, 2009; OECD, 2006). The latter encourages continuous child development throughout the ECEC years and ensures greater professionalism of staff working with both younger and older children (Shonkoff and Philips, 2000).

Why do qualifications, education and professional development matter?

Staff qualifications/education/professional development → pedagogical quality → child outcomes

The main importance of staff lies in their effect on the process and content quality of ECEC² (Sheridan, 2009; Pramling and Pramling Samuelsson, in press 2011). The training and education of ECEC staff affects the quality of services and outcomes primarily through the knowledge, skills and competencies that are transmitted and encouraged by practitioners. It is also considered important that staff believe in their ability to organise and execute the courses of action necessary to bring about desired results (Fives, 2003). Qualifications can matter in terms of which skill sets and what knowledge are recognised as important for working with young children. The skills and staff traits that research identifies as important in facilitating high-quality services and outcomes are:

- Good understanding of child development and learning;
- Ability to develop children's perspectives;
- Ability to praise, comfort, question and be responsive to children;
- Leadership skills, problem solving and development of targeted lesson plans; and
- Good vocabulary and ability to elicit children's ideas.

However, it is not the qualification *per se* that has an impact on child outcomes but the ability of better qualified staff members to create a high-quality pedagogic environment that makes the difference (Elliott, 2006; Sheridan *et al.*, 2009). There is strong evidence that enriched stimulating environments and high-quality pedagogy are fostered by better qualified staff; and better quality pedagogy leads to better learning outcomes (Litjens and Taguma, 2010). Key elements of high staff quality are the way staff involve children and stimulate interaction with and between children as well as staff's scaffolding strategies, such as guiding, modelling and questioning.

More specialised staff education and training on ECEC are strongly associated with stable, sensitive and stimulating interactions (Shonkoff and Philips, 2000). Other elements of high staff quality include staff's content (curriculum) knowledge and their ability to create a multi-disciplinary learning environment (Pramling and Pramling Samuelsson, in press 2011).

What matters most?

Level of education and/or pedagogical practices

Studies that have addressed the question of whether higher staff qualifications lead to better pedagogical practice have yielded mixed results. There are various studies showing that, generally, a higher level of education is associated with higher pedagogic quality in ECEC settings. One study found that preschool teachers with bachelor's degrees were the most effective practitioners. Their effectiveness was measured within the classroom and based on stimulation, responsiveness and engagement of the children in learning activities (Howes *et al.*, 2003). The results of the Effective Provision of Pre-school Education (EPPE) study from England (United Kingdom) have also shown that key explanatory factors for high-quality ECEC were related to “staff with higher qualifications, staff with leadership skills and long-serving staff; trained staff working alongside and supporting less qualified staff; staff with a good understanding of child development and learning” (Siraj-Blatchford, 2010). Higher proportions of staff with low-level qualifications were related with less favourable child outcomes in the socio-emotional domain (social relationships with their peers and co-operation).

However, the general conclusion that higher education of ECEC staff leads to higher pedagogical quality and, therefore, to better child outcomes is not supported by all studies. Early *et al.* (2007) emphasise that teacher quality is a very complex issue. There is no simple relationship between the level of education of staff and classroom quality or learning outcomes. They studied the relationship between child outcomes and staff qualifications and found no, or contradictory, associations between the two. They argue that increasing staff education will not suffice for improving classroom quality or maximising children's academic gains. Instead, raising the effectiveness of early childhood education will likely require a broad range of professional development activities and support for staff's interactions with children. An area that can improve pedagogical practices of ECEC staff includes supporting staff's competence to communicate and interact with children in a shared and sustainable manner (Sheridan *et al.*, 2009).

Research also points out that it is not necessary that all staff have high general levels of education. Highly qualified staff can have a positive influence on those who work with them and who do not have the same high qualifications. The EPPE study finds that the observed behaviour of lower-qualified staff turned out to be positively influenced by working alongside highly trained staff (Sammons, 2010).

Specialised education and training

Not only the level of education but also the content of the staff's educational or training curriculum is important for the level of quality in ECEC. Specialised education is associated with better child outcomes and improved staff competences to provide suitable pedagogical learning opportunities. Specialisation can refer to “any education or training focusing on early childhood education, child development or similar, above and beyond general educational attainments” (Litjens and Taguma, 2010).

Initial education and training in areas such as early child development and early education increase the likelihood that practitioners are effective in promoting the educational, socio-emotional and healthy development of children.

The practitioners' ability to create rich, stimulating environments in ECEC is jeopardised when staff have inadequate, insufficient or incorrect content and pedagogical knowledge. When trained on matters related to early development and care, staff can better develop a

child's perspective (Sommer *et al.*, 2010); are better able to integrate playing and learning into practice (Pramling Samuelsson and Asplund Carlsson, 2008; Johansson and Pramling Samuelsson, 2009); have increased ability to solve problems and develop targeted lesson plans; and have an improved vocabulary, which stimulates early literacy development (NIEER, 2004). Additionally, staff with higher education *and* specialised training engage in more positive teacher-child interactions including praising, comforting, questioning and being responsive to children (Howes *et al.*, 2003).

However, specialised education and training does not *guarantee* greater effectiveness (Hyson *et al.*, 2009). The quality of the education or training programme may be a more critical factor in staff's ability to stimulate children's development and learning. There is a strong need for good initial staff preparation; and there is a call for greater consistency across initial professional preparation programmes to enhance quality (Elliot, 2006).

Ongoing education and training are also important. Research shows that in order for staff to maintain their professional quality, they need to engage in ongoing professional development³. A well-trained practitioner does not only have a good initial level of education but makes sure that the effects of initial education do not fade out (Fukkink and Lont, 2007; Mitchell and Cubey, 2003). Ongoing professional development has the potential to fill in the knowledge and skills that staff may be lacking or require updating due to changes in particular knowledge fields. This is especially crucial in ECEC where new programmes are being developed continuously. The body of research on what works is growing, the discussions on quality in ECEC are ongoing, and the focus has changed to a developmental perspective.

In-service (ongoing) education and training can be conducted "on the job" or can be provided by an external source, such as training institutes or colleges. It can be provided through for instance staff meetings, workshops, conferences, subject training, field-based consultation training, supervised practices and mentoring. The key to effective professional development is identifying the right training strategies to help ECEC practitioners stay updated on scientifically based methods and curriculum subject knowledge so as to be able to apply this knowledge in their work (Litjens and Taguma, 2010). It also pointed out that it should continue over a longer period of time: staff should have long-term or regular opportunities for training (Sheridan, 2001). Only when learning experiences are targeted to the needs of staff and are true learning experiences with development opportunities can professional development have favourable outcomes (Mitchell and Cubey, 2003).

An effective way of improving knowledge and skills is found to be subject training. Field-based consultation can also be very effective, as it provides ECEC staff with the possibility to receive feedback on their practices. Furthermore, practitioners who do not have a degree, but who attend ECEC-relevant professional workshops are found to provide higher quality care than colleagues who do not attend (Burchinal *et al.*, 2002). However, in general, there is little clarity about what forms of professional development are *most* effective. One of the reasons is that staff have different needs: practitioners have very different backgrounds, and effective training methods should suit these differences (Elliott, 2006).

Leadership of managerial staff

Managers play an important role in supporting professional development. Managers matter for the extent to which the centre supports, stimulates and subsidises professional development (Ackerman, 2006). Staff quality is maintained by leadership that motivates and encourages working as a team, information sharing and professional staff development (OECD, 2006). The quality of leaders and managers of ECEC services is also strongly

related to their level of education and professional development, as found in the EPPE study (Sylva *et al.*, 2010).

Differences between education and training for educating different age groups

The United States National Institute of Child Health and Development (NICHD) points out that, although staff education and training has an impact on infants and toddlers, staff's formal education is a stronger predictor for children of preschool age than for younger children (NICHD, 2000). For younger children (toddlers and infants), specialised and practical training seems to be more strongly associated with pedagogic quality and cognitive and social outcomes.

Social equality and professional development

ECEC is often seen as a vehicle to give children from socially disadvantaged backgrounds a "head start" when commencing compulsory education. Early childhood educators come across increasingly complex social environments and encounter a multiplicity of family backgrounds and experiences. These factors create imperatives to adopt new pedagogies and organisational practices to accommodate this pluralism (Elliott, 2006). In various countries, this has led to knowledge and skills requirements for staff.

In line with the issues of integration and prevention of social inequality highlighted by politicians and professionals, current and emerging content for continuing professional development include: intercultural approaches, approaches to second languages, working with children with special needs, working with children at risk and special focus on language acquisition (Eurydice, 2009). However, little is known yet about the effectiveness of these approaches.

What are the policy implications?

Raising qualifications of ECEC practitioners

Highly qualified practitioners often provide better quality ECEC. This can yield better child outcomes, both socially and academically, not only in the short term but also in the long term. It is not necessary that all staff working in ECEC have high levels of education, which may also be impossible to realise and not desirable. However, those with lower levels of general education should work alongside those who are highly qualified.

Providing ongoing professional development to ECEC staff

Ongoing professional development can lead to higher quality ECEC services and outcomes. Attending a workshop may be an easy way to realise means of professional development; however, high-quality subject training, field-based consultation training or supervised practices may be more effective. Ongoing professional development should not only be available, but it should be a requirement to stay and grow in the profession. Furthermore, professional development should be tailored to staff needs.

Providing specialised training courses for those working with young children

In-service training that provides possibilities for ECEC specialisation is considered beneficial: educating young children requires specialised skills and content knowledge, including a variety of subject and development areas.

What is still unknown?

Concept of quality in ECEC

Researchers are still debating the concept of “quality” in ECEC. Judgement of quality involves values. The effect of the education and training of teachers on the quality of ECEC depends on the definition of quality and the instrument that is used to measure this quality. Children’s developmental outcomes are often used as the most important dependent variable in assessing high-quality ECEC, but this leaves the debate open on *which* developmental outcomes should be studied.

Content of training and education of ECEC staff

The debate around the concept of “quality” in ECEC also means that the content of the training and education of ECEC staff remains a point of discussion. Some early childhood specialists voice concerns about the suitability for young children of the emphasis on 1) standards and testing (performance rather than meaning making), 2) the teaching of predefined knowledge rather than play, discovery, personal choice and the responsibility of the child – the traditional tools of early childhood learning, and 3) the neglect in ECEC curricula of developmental readiness.

Effectiveness of the level of education and different in-service training strategies

Even though correlations have been found between the level of education and pedagogical quality, the exact relationship between the two is still unclear. Also, little is known about the effectiveness of different training strategies to help ECEC practitioners stay updated. More research is needed on how to engage staff in learning about and implementing evidence-based practices (Diamond and Powell, 2011).

Knowledge, leadership and competences of managerial staff

Focus has been on the individual qualifications of staff. Knowledge, leadership and competences of the manager have also been found to be important. Research is needed that shows how important this is and why; what kind of qualifications and training would be most relevant for managers; what would be the most effective delivery of such training; etc.

Ethnic diversity in training and education

The effectiveness of teacher training (both initial and in-service) in which special attention is devoted to social and ethnic diversity has hardly been evaluated. This is a growing issue of importance because of the greater ethnic diversity of the population many countries are facing.

WHY DO WORKING CONDITIONS MATTER FOR BETTER CHILD DEVELOPMENT?

What are “working conditions”?

Working conditions in ECEC settings are often referred to as structural quality indicators (e.g., wages, staff-child ratio, maximum group size, working hours, etc.) and other characteristics (e.g., non-financial benefits, team-work, manager's leadership, workload, etc.) that can influence the ability of professionals to do their work well and their satisfaction with the workplace, work tasks and nature of the job.

What is at stake?

Attracting, training and retaining suitably qualified ECEC staff is a challenge. Good working conditions are strong incentives for qualified staff to enter the profession. Structural quality indicators have received ample attention because they can usually be regulated or guided at the national level. For staff quality, it is also crucial that practitioners are motivated and supported in applying what they have learned.

The European Commission's Early Matters symposium (European Commission, 2009) concluded that many research findings indicate that, in addition to training and education of staff, staff working conditions are important in providing safe, healthy and good learning environments for children. In spite of these findings, the ECEC sector is usually associated with relatively poor working conditions and poor compensation leading to high turnover rates. ECEC centres often experience turnover rates exceeding 40% annually, undermining the quality of care (Moon and Burbank, 2004).

Why do working conditions in ECEC matter?

Research points out that the ability of staff to attend to the needs of children is influenced not only by their level of education and training but also by external factors, such as their work environment, salary and work benefits (Shonkoff and Philips, 2000). Working conditions can have an impact on staff job satisfaction and their ability to carry out their tasks; and their possibilities to positively interact with children, give them enough attention and stimulate their development.

Strongly associated with stable, sensitive and stimulating interactions with children are the context and conditions in which staff member works. One study found that low wages: i) effect the ways in which staff interact with children, and ii) are related to high turnover rates (Huntsman, 2008). High turnover rates can have a negative effect on ECEC quality since staff provision is less stable, which, in turn, can impact child development. When staff members regularly change within a group of children, staff and children are less able to develop stable relationships; and nurturing, stimulating interactions take place less often (CCI, 2006).

The body of research on the effects of working conditions on child development is not very extensive, and findings do not always point in the same direction. This is mainly because there is a complex inter-relationship between staff-child ratios, staff qualifications, quality and type of provision that makes it difficult to single out the effect of a particular characteristic of working conditions (Sammons, 2010).

What matters most?

Firstly, it is important to point out that more research is needed in this area. Available research findings focus on the effects on staff satisfaction rather than on child development. Many aspects of working conditions are found to be related to the quality of ECEC services, while a few aspects have been found to be related to child development. Table 2.1 presents an overview of research findings, pointing to characteristics of working conditions that matter.

Table 2.1. Which staff working conditions improve ECEC?

Optimal staff working conditions	Areas of improvement	
	<i>ECEC services</i>	<i>Child outcomes</i>
1. High staff-child ratio and low group size	X	X
2. Competitive wages and benefits	X	unclear
3. Reasonable schedule/workload	X	unclear
4. Low staff turnover	X	X
5. Stimulating and playful physical environment	X	unclear
6. Competent and supportive centre manager	X	unclear

Note: Areas of improvement that remain “unclear” present important opportunities for future ECEC research.

Source: Ackerman, 2006; Burchinal *et al.*, 2002; De Schipper *et al.*, 2004; De Schipper *et al.*, 2006; De Schipper *et al.*, 2007; Diamond and Powell, 2011; Huntsman, 2008; Litjens and Taguma, 2010; Loeb *et al.*, 2004; Moon and Burbank, 2004; Sheridan and Shuster, 2001; Sheridan *et al.*, 2009; Torquati *et al.*, 2007.

Staff-child ratio

Higher staff-child ratios, referring to a smaller number of children per staff, are usually found to enhance ECEC quality and facilitate better developmental outcomes for children (Burchinal *et al.*, 2002; De Schipper *et al.*, 2006; Huntsman, 2008; Torquati *et al.*, 2007). While there have been some older studies with contradictory results, the weight of evidence favours the conclusion that staff-child ratio in an ECEC setting is significantly associated with quality (Huntsman, 2008). Findings on “quality” can be summarised as follows.

Better staff-child interactions and less stress for staff

Larger staff-child ratios are associated with better working conditions and less stress. Staff are found to be more supportive when they are responsible for a smaller group of children (De Schipper *et al.*, 2006). A higher staff-child ratio improves working conditions within ECEC settings, as staff can give sufficient attention to different developmental domains and create more caring and meaningful interactions with children. As the number of children per staff member increases, staff spend more time in restrictive and routine communication with children and less in positive verbal interactions (Litjens and Taguma, 2010; Rao *et al.*, 2003).

Better child development

Children become more co-operative in activities and interactions with larger staff-child ratios. They also tend to perform better in cognitive and linguistic assessments when staff-child ratios are higher. Furthermore, academic development seems to be enhanced by higher staff-child ratios, although there are not many (recent) studies that have investigated this topic (Huntsman, 2008; Sylva *et al.*, 2004). A limitation of the research mentioned above is that most findings are almost exclusively correlational and there have been very few experimental studies (Huntsman, 2008). An experimental study carried out by Chetty *et*

al. (2011) found that even though smaller staff-child ratios of three-to-four-year-olds improved outcomes, there were no long-lasting effects on adult earnings. However, the *overall* quality of the ECEC setting did have an effect on adult earnings.

High staff-child ratios are considered particularly important for younger children; there is evidence indicating that infants and toddlers especially benefit from high staff-child ratios (De Schipper, 2006). In many countries staff-child ratios have been regulated with higher staff-child ratios for the very young and lower ratios for older children (NICHD, 2002). Research is lacking, however, on exactly which ratio is most favourable to enhance teacher job satisfaction, ECEC quality and child outcomes. Nevertheless, many early childhood educators believe that anything less than a 1:3 or 1:4 ratio for children up to two years old is insufficient to allow staff to interact effectively with each child (Litjens and Taguma, 2010).

Group size

Increased process quality, although the direct effect remains unclear

Group sizes are often regulated, prescribing the number of children to be arranged and supervised as a group. Not all studies find effects of group size on the quality of ECEC: effect sizes are usually small, and the “size” factor is often difficult to single out when staff-child ratios are included in the same analyses. Another research limitation on group size is that it rarely takes into account the age mixing of children, which may be an important factor (with homogeneous age groups being easier to handle). The overall research conclusion, however, is that group size has an effect on process quality (e.g., staff-child relationship, staff-parent communication). If staff experience their working conditions as more pleasant, this will result in more caring and stimulating behaviour (Huntsman, 2008; Burchinal *et al.*, 2002; Clarke-Stewart *et al.*, 2002).

Classroom quality and staff job satisfaction

Research suggests that it is not only the staff-child ratio but also the number of adults in a classroom that impacts quality and job satisfaction. The quality of the classroom environment is found to improve with every additional adult in the room. When practitioners work together in a classroom, this provides opportunities for supervision, consultation and discussing work challenges (Goelman *et al.*, 2006). Clear roles and expectations must be defined to optimise teamwork in ECEC settings. Under current practice, the hiring of assistants has generally failed to compensate for larger groups and less contact with teachers (Chartier and Geneix, 2006; Finn and Pannozzo, 2004).

Remunerations: wages and other benefits

Higher wages and better working conditions affect people’s job satisfaction, work motivation and, indirectly, the quality of their teaching, caring and interactions with children (Huntsman, 2008; Moon and Burbank, 2004).

Low wages leading to less process quality for child development

Research has indicated that where there are very low wages in ECEC, it “impacts quality primarily by preventing qualified and committed individuals from considering working in child care or early education in the first place” (Manlove and Guzell, 1997). Low wages are, as mentioned above, related to high staff turnover rates (Moon and Burbank, 2004), which influence children’s language and socio-emotional development as well as the relationships they form with practitioners (Whitebook 2002; Torquati 2007). Low wages are also correlated with the perception that working in the ECEC sector is not a high-status profession (Ackerman, 2006).

Although pay in ECEC-related professions in most OECD countries is not very high (OECD, 2006), this is not the case in all OECD countries. In Scandinavian countries, for instance, where a bachelor's degree is needed to work as an ECEC teacher, staff receive better pay, and their job has a higher status than in countries with lower pay. Countries with split systems often have lower education requirements and lower wages for practitioners working with very young children (up to three or four years of age) and higher educational requirements and better pay (and better status) for those working with children ages three or four to primary school age.

Non-financial incentives leading to better job satisfaction and better process quality

The number of vacation days and the compensation that ECEC practitioners receive for additional work hours are also found to have a positive effect on job satisfaction. This, in turn, is related to the quality of teacher-child interactions (Doherty *et al.*, 2000).

Social status and professional identity

Even when preschool teachers experience higher status within the sector, they do not necessarily experience improved recognition from the outside world, something seen in Denmark and Sweden (Berntsson, 2006). In order to raise the value attributed to the profession and counter gender stereotypes, it is suggested that the “professional identity” of the ECEC workforce must change (OECD, 2006).

Turnover rate

Stability in care has been found to be strongly and consistently positively related to child outcomes (Loeb *et al.*, 2004). High staff turnover is pronounced across studies of child care in various countries, somewhere between 30% and 50% annually (Huntsman, 2008; Moon and Burbank, 2004).

High staff turnover is associated with lower quality service and poorer child outcomes. Centres with low staff turnover rates have staff that engage in more appropriate and attentive interactions with children. High turnover rates disrupt the continuity of care. Moon and Burbank (2004) argue that when turnover rates are high, children spend less time being engaged in meaningful activities.

Workload

Heavy workloads are associated with stressed staff. Workload refers to the number of working hours, indicating the extent to which staff's schedules are compatible with family life and the physical demands of the job. Large group sizes, low staff-child ratios and a heavy workload are potential stressors for ECEC practitioners. In general, stressed staff perform less well. Some research findings show the effects of workload on ECEC quality, indicating that practitioners with a heavy workload perform less well than colleagues with lighter schedules (De Schipper *et al.*, 2007).

Physical aspects of the setting

A rich playing and learning environment is found to be of importance. More space is considered beneficial for child development, although the full impact or effects of physical aspects remain unclear. The United States National Institute of Child Health and Human Development (NICHD, 2002) found a significant link between positive care giving behaviour and the physical characteristics of their environment, e.g., the space requirements in more general terms and the instruments and materials available within the setting. Children were

found to be less easily distracted in settings where they had more space available to them. Also, in these circumstances, staff provided more age-appropriate practices and behaviour.

Cross-cultural studies of ECEC quality highlight the fact that differences in physical space and staff-child ratio create different opportunities for staff. With more space, staff are better able to organise children into smaller groups, which, in turn, creates better learning conditions and opportunities for children to play, relax and learn in a variety of ways (Sheridan and Shuster, 2001; Sheridan *et al.*, 2009). Research appears to provide little or no guidance regarding the appropriateness of space requirement regulations (Huntsman, 2008), and further research on the importance of space for child development is needed.

Role of the manager in supporting professional development

Managers are important in facilitating conducive working conditions and supporting professional development. Although part of working conditions is subject to regulation, another part is centre-specific. ECEC providers who provide better working conditions are observed to provide better care and education (Litjens and Taguma, 2010; Diamond and Powell, 2011). The role of managers of ECEC centres is important in this, as they are the key factor in providing favourable working conditions for their staff.

Evidence shows that ECEC practitioners who experience little professional support from the centre's management have lower job satisfaction and perform their teaching and care-giving tasks less well than those that are professionally supported (Ackerman, 2006). Professional support usually means that the centre supports, stimulates and subsidises professional development, there are regular staff meetings with the management of the centre, and there is encouragement and consultation by colleagues (Ackerman, 2006). The importance of ongoing professional development in making sure that practitioners stay up-to-date with evidence-based practices (staff meetings, conferences and workshops, supervised practices, etc.) has been found in various studies (Litjens and Taguma, 2010; see also "Research Brief: Qualifications, Education and Training Matter").

What are the policy implications?

Investing in ECEC to improve working conditions

Research findings indicate that staff that are happy in their job provide better care and are better practitioners. Group size and staff-child ratio are important quality factors in facilitating good working conditions as well as staff having enough time and attention to spend on the children under their supervision. Smaller groups and higher staff-child ratios can facilitate this. Time for staff to plan, document, analyse and reflect – individually and collectively – on their work with children is seen to improve quality. However, increasing staff-child ratios and reducing group size is expensive. For example, reducing the average class size from 15 to 10 requires a 50% increase in the number of teachers and, thus, total teacher salaries paid. Plus there is little clarity on exactly which group sizes or staff-child ratios are most favourable or optimal (Chetty *et al.*, 2011).

In order to enhance the status and quality of early childhood work, governments may wish to consider introducing equal working conditions (salaries, benefits and professional development opportunities) for equivalent qualifications across the early childhood and primary education fields. Care should be taken that in-service training is linked to career progression and to obtaining further qualification (OECD, 2006).

Giving financial and non-financial incentives to keep well-trained staff

Compensation is one important factor in facilitating good working conditions. Increased salaries will most likely reduce staff turnover rates and attract better qualified staff. Additionally, it increases job satisfaction. Providing non-financial support and incentives for practitioners is also likely to improve staff well-being and encourage ongoing professional development.

Turnover should only be welcomed if the lowest-quality ECEC staff are leaving the profession; this practice opens the door to more high-quality staff. New research suggests that the “forcing out” of low-quality ECEC staff may dramatically improve student outcomes (Hanushek, 2010).

Raising awareness of ECEC centre managers

Going beyond the regulations, centre managers can be seen to play an important role in providing good working conditions for their staff, facilitating professional development and further training of staff. Raising awareness among managers on the importance of ensuring favourable working conditions and how they can actually facilitate these are important in raising ECEC quality (OECD, 2006).

What is still unknown?

Relationship between working conditions and child development

The research evidence for the impact of working conditions on child outcomes is not yet very strong. Working conditions have not often been at the heart of studies. Researchers have linked certain workplace characteristics (staff-child ratios and staff compensation) to differences in programme quality and/or to staff turnover and less often to measures of child development (Whitebook, 2009). Research on how working conditions affect ECEC quality and child outcomes could shed new light on the importance of working conditions.

More research on which aspects of working conditions matter most for which children

Staff-child ratios are found to be important for all young children, but there is evidence that infants and toddlers especially benefit from high staff-child ratios (De Schipper, 2006). The exact role of space in facilitating better working environments and enhancing child development also remains largely unknown, and the role of multiple adults in ECEC settings is not sufficiently defined to maximise the impact on child outcomes. Additionally, no studies have specifically investigated whether working conditions (and which aspects of working conditions) have different effects on different groups of children, e.g., migrant children or children at risk.

NOTES

- 1 In the literature, “staff” is the term that is usually used to refer to those who work directly with children in the ECEC field. They are also referred to as “professionals”, “teachers”, “caregivers” or “practitioners”.
- 2 “Process quality” refers to what children actually experience in their programmes: that which happens within a setting. “Content quality” specifically refers to the substance of what is being learned (e.g., curriculum).
- 3 “Ongoing professional development” refers to in-service education and training. Litjens and Taguma (2010) give a clear definition of in-service education. This “includes all planned programmes of learning opportunities for staff members of ECEC providers for the purpose of improving the performance of individuals in already assigned positions”.

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CHAPTER 3

WHERE DOES FINLAND STAND COMPARED TO OTHER COUNTRIES?¹

Finland's ECEC workforce has several strengths, such as a high qualification level of staff with teaching responsibilities, advanced professional development opportunities and favourable working environments. Staff with teaching responsibilities are well educated and trained with high initial qualification requirements. There is broad provision of initial education, with full-time and part-time programmes provided publicly and privately. Professional development is mandatory for all staff; and training costs are shared between individual staff members, the government and employers. Professional development is offered by a range of providers, with different modes, on a variety of topics. Working conditions in terms of staff-child ratio are among the best of OECD countries.

Capitalising upon the strengths, Finland could further enhance quality in its ECEC workforce. Other country practices would suggest such options as: 1) reviewing the licensing arrangement; 2) improving leadership training; 3) providing more professional development opportunities to better respond to societal changes, such as how to introduce the use of ICT in ECEC, and language teaching for immigrant children; 4) improving gender balance; and 5) exploiting "recognition of prior learning" as a measure to attract and retain staff.

Finnish pre-primary education for six-year-olds is administered by the Ministry for Education and Culture, while ECEC services for zero-to-six-year-old children are currently administered by the Ministry for Social and Health Affairs; although preparations are being undertaken to move responsibilities for all ECEC services to the Ministry of Education and Culture. In New Zealand and Sweden, responsibilities for the whole ECEC sector fall under one ministry.

In both Finland and Sweden compulsory school commences at age seven, whereas it starts at age five in New Zealand. At the administrative level, Finland separates the year before formal schooling (for six-year-olds) from ECEC for younger children, although most often both take place within the same setting. ECEC services for zero-to-six-year-olds and the preschool class for six-year-olds have different curricula and regulations in place, but only ECEC for six-year-olds is free of parental fees.

All staff working in ECEC are referred to as “educators” in Finland. The term “educator” refers to ECEC staff responsible for care, education and teaching in all different service types. In Finland, ECEC provisions have multi-professional staff, and, therefore, there is variation in the level of education of staff. In general, it can be noted that kindergarten teachers (staff in teaching positions) are highly educated and trained in Finland, as is also the case in Sweden and New Zealand. New Zealand has a strong emphasis in its workforce development and qualification system to the education of indigenous and pacific children.

Although staff in Finland are well educated and trained, especially teaching staff, there are potential areas for reflection, which are mostly related to the professional development of staff and leadership skills in ECEC.

Strengths

High qualifications for ECEC teaching staff

Policymakers can ensure the quality of teacher education by setting minimum qualification requirements or raising accreditation requirements for teacher education programmes. Accreditation is a means to ensure that diverse teacher education programmes meet the standards set by the teaching field at large and include the preparation for key skills, such as teaching methodologies, classroom management and student evaluation.

Five job types are commonly used for staff working in the ECEC sector across OECD countries (Table 3.1).

Table 3.1. Job types for ECEC workers

Child care workers	The qualifications of child care workers differ greatly from country to country and from service to service. In most countries, child care workers have a vocational-level diploma, generally at a children's nurse level (upper secondary, vocational level); although many countries will also have specialist staff trained to secondary-level graduation, plus a one-to-two-year tertiary-level vocational diploma.
Pre-primary teacher (or kindergarten/preschool teachers)	Pre-primary teachers are generally trained at the same level and in the same training institutions as primary school teachers. This profile is found in Australia, Canada, France, Ireland, the Netherlands, the United Kingdom and the United States. In some of these countries, e.g., the Netherlands, the pre-primary teacher is trained both for the preschool and primary sectors. In federal countries, variation exists across different states or provinces, but the predominant type of training is in primary school-oriented pedagogy (readiness-for-school is a primary aim of early education).
Family and domestic care workers	Family and domestic care workers are caregivers working in a family day care provision or home-based care setting. These are traditionally provided in a home setting. This can be at the childminder's home or at the child's own home where a qualified or registered childminder looks after the child. This type of care is most common for children prior to preschool, i.e., those up to three years old.
Pedagogues	In Nordic and central European countries, many pedagogues have been trained (upper-secondary or tertiary education) with a focus on early childhood services rather than primary teaching. Pedagogues may also have received training in other settings, e.g., youth work or elderly care. In some countries, pedagogues are the main staff members responsible for the care and education of children.
Auxiliary staff	There are many types of auxiliary staff working in centres that have been trained at different levels. On one end of the scale is auxiliary staff who do not need a formal qualification in the area, while auxiliaries in the preschool service sector in Nordic countries have often gone through a couple years of upper secondary vocational training.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011; OECD Family Database, 2010.

Across OECD countries, a wide range of qualifications are given to staff working in ECEC (by ISCED levels)² (Figure 3.1). In "split" system countries, the majority of countries indicated that staff in teaching positions require a minimum ISCED level 5, while it is a minimum level of ISCED level 3 for staff in caring positions.

Countries aiming to deliver "integrated" ECEC services, such as Finland, New Zealand and Sweden, tend to have higher qualification requirements for staff in caring positions than countries with a split ECEC system. Finland, New Zealand and Sweden have parallel staff types with different qualification levels all working with the same age groups since they have an integrated ECEC system, but different staff have different responsibilities.

In Finland, ECEC provisions have multi-professional staff, and, therefore, there is variation in the level of education of staff. At least one third of the staff must have a tertiary degree (bachelor's at the university level, or ISCED level 5B), and the remaining staff must have an upper secondary education at ISCED level 3 at minimum. The result is that teachers in kindergarten are required to have studied up to university or polytechnic level and need to have a bachelor's diploma. Staff in caring positions need to have studied up until (at least) ISCED level 3. This indicates that child care workers work alongside more highly qualified staff in Finnish ECEC centres. Pre-primary teachers (in pre-primary education for six-year-olds) are required to have a bachelor's diploma from a university (Figure 3.1).

Preschool teachers in Sweden are also highly educated with a minimum requirement of ISCED level 5A. Similar to Finland, staff in caring positions, which are referred to as "childminders" in Sweden, need an upper secondary education degree (ISCED level 3). Both staff can work with children up until the age of seven.

New Zealand also operates with two parallel qualifications in ECEC: play centre leaders have initial education requirements similar to staff in caring positions in Finland and Sweden (ISCED level 3); while teachers are educated at university level. In addition to these qualifications, New Zealand has a separate qualification for staff working with indigenous and/or pacific children: the “*Kaiako*” qualification. *Kaiako* teachers can work with children aged six as well, although they attend already compulsory primary schooling.

Figure 3.1. Required ISCED levels for different types of ECEC staff

Staff titles with minimum required ISCED level in brackets

	Staff working for the care sector
	Teaching staff working for the education sector or in an integrated system for care and education
	Compulsory schooling

Country	Age						
	0	1	2	3	4	5	6 7
Australia	Child care Worker (4) / Child care Manager (5)						
Austria	Preschool/Kindergarten Teacher (5A)						
Belgium (Flemish Community)	Kindergarten Pedagogue (4A)						
Belgium (French Community)	Child care Worker in the care sector (3)						
	2.5y Child care Worker in the education sector (3)						
Belgium (French Community)	2.5y Kindergarten teacher / Pedagogue (5B)						
	Child care Worker (3)						
Canada (British Columbia)	2.5y Pre-Primary Teacher (5)						
	Early childhood educator (3)					Kindergarten teacher (5A)	
Canada (Manitoba)	Early Childhood Educator (5B)					Kindergarten teacher (5)	
Canada (Prince Edward Island)	Family Day Carer (3) / Child carer in centre-based care (4)					Kindergarten teacher (4)	
Czech Republic	Child care Worker (3)					Pedagogue (3)	
Denmark	Pedagogue (5)						
Estonia	1.5y	Preschool pedagogue (5)					
Finland	Child care worker in kindergarten (2/3 of staff should have at least level 3)					Pre-primary Teacher (5B)	
Germany	Kindergarten Teacher (5B)						
	Child care worker (3)						
	Pedagogue (4A)						
Hungary	Pedagogue for childhood or social pedagogue (5)						
Ireland	Child care Worker (3)					Pedagogue (5)	
Israel	Pre-primary Teacher (5)						
Italy	Child care Teacher (5)						
	Educator (child care centres) (5B)					Pre-primary teacher (6)	
Japan	Nursery Teacher (5B)						
Korea	Kindergarten Teacher (5B)						
	Child care Worker (3)						
Luxembourg	Pre-Primary Teacher (5)						
Mexico	Pre-Primary Teacher (Instituteur) / Educator (5B)						
	Indigenous ECEC Teacher (3)					Indigenous preschool Teacher (3)	
Netherlands	ECE/Preschool Teacher (5)						
New Zealand	Child carer (centred child care) / Official Childminder (3)						
	Playgroup Leader (3)					Kindergarten/ primary school teacher (4)	until 12 y
Norway	Playcentre Leader (3)						
	Qualified Education and Care Teacher / Kindergarten Teacher (5B)						
Poland	Teacher for pacific/indigenous children (Kaiako) (5B)						
Portugal	Child/Youth Worker (3)						
	Pedagogical Leader (Kindergarten & Family Kindergarten) / Head Teacher (5A)						
Slovak Republic	Child care Worker (3)					Kindergarten teacher (5)	
Slovenia	Preschool Teacher (5A)						
	Nursery School Worker (3B)					Kindergarten Teacher (3)	
Spain	Family Day Carer (3)						
Sweden	Preschool teacher (5B)						
	Early education teacher (5B)					Preschool teacher (5A)	
Turkey	Child minder (3)						
United Kingdom (Scotland)	Preschool teacher (5A)						
	Pre-Primary Teacher (5A)						
United States (Georgia, Massachusetts, North Carolina, Oklahoma)	Child care practitioners (5)						
	Preschool Teacher (5)						

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Broad initial education provision

Full-time and part-time provision

A majority of countries reported that they provide full-time, as well as part-time, provision of initial education for kindergarten or preschool staff; fewer countries reported such programmes for child care and family or domestic care staff (Table 3.2). Offering not only full-time initial education but also part-time education might make the education trajectory more attractive for people who have a job but wish to switch professions, people who wish to work alongside their study or people with family responsibilities.

Finland has a wider provision of initial education arrangements than its reference countries. Finland, New Zealand and Sweden offer both full- and part-time initial education for kindergarten staff. For family day care staff, only Finland offers full- and part-time initial education. Sweden provides full-time education for family day care staff only, whereas New Zealand does not have a specific initial education training programme for family or domestic care staff.

Table 3.2. Provision of initial education across different types of staff

	Kindergarten or preschool staff	Child care staff	Family day care staff
Full time	Australia, Austria, British Columbia (CAN), Czech republic, Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), , Germany, Hungary, Italy Japan, Korea, Luxembourg, Manitoba (CAN), Netherlands, New Zealand, Norway, Poland, Prince Edward Island (CAN), Scotland (UKM), Slovenia, South Australia (AUS), Spain, Sweden, Turkey	Australia, British Columbia (CAN), Denmark, Flemish Community (BEL), Finland, French Community (BEL), Germany, Hungary, Italy, Japan, Korea, Manitoba (CAN), Netherlands, New Zealand, Poland, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Finland, Germany, Manitoba(CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN), Sweden
Part time	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), Germany, Italy, Japan, Korea, Manitoba (CAN), New Zealand, Norway, Poland, Prince Edward Island (CAN), Scotland (UKM), Slovenia, Spain, Sweden.	Australia, British Columbia (CAN), Denmark, Finland, Flemish Community (BEL), French Community (BEL), Germany, Italy, Japan, Korea, Manitoba (CAN), Netherlands, New Zealand, Poland, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Denmark, Finland, Germany, Manitoba (CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN)

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Large public provision of initial education in addition to private provision

Initial education is more commonly provided by public institutions than private institutions; this is especially the case for kindergarten or preschool staff (Table 3.3). Private institutions might be offer initial education programmes for a higher price, whereas public institutions often charge lower fees. However, this is not always the case: private institutions can receive public funding.

In Finland, there is both public and private provision of education for all ECEC staff. In Sweden there is no private provision of initial education for ECEC staff. New Zealand has private and public provision for kindergarten staff, but does not offer public education for staff aiming to work as playgroup leaders.

Table 3.3. Public and private provision of initial education

	Kindergarten or preschool staff	Child care staff	Family day care staff
Public	Australia, Austria, British Columbia (CAN), Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), Georgia (USA), Germany, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain, Sweden, Turkey	Australia, British Columbia (CAN), Denmark, Finland, Flemish Community (BEL), French Community (BEL), Germany, Hungary, Japan, Italy, Korea, Manitoba (CAN), Mexico, Netherlands, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Spain, Sweden	Australia, Austria, Denmark, Finland, Germany, Manitoba (CAN), Poland, Portugal, Prince Edward Island (CAN)
Private	Austria, British Columbia (CAN), Estonia, Finland, Flemish Community (BEL), Georgia (USA), Germany, Italy, Korea, Massachusetts (USA), New Zealand*, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Spain	Australia, British Columbia (CAN), Finland, French Community (BEL), Germany, Italy, Japan, Korea, New Zealand*, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Spain	Australia, Austria, Finland, Germany, Italy, Manitoba (CAN), Netherlands, Poland, Portugal, Prince Edward Island (CAN)

* New Zealand: regarding kindergarten/preschool – private provision: data refers only to initial education provision for *kaiako* (teacher for indigenous/pacific children) and not for kindergarten teachers. Regarding child care – private provision: data refers only to the initial education provision for playgroup leaders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Alignment or integration of initial education programmes

Initial education programmes are often aligned with qualification arrangements, *i.e.*, different initial education programmes are in place for staff working with different age groups in ECEC when the education requirements are different. However, in some countries, initial education for staff in ECEC is integrated or co-ordinated: in Finland, New Zealand and Sweden initial education for teaching staff in ECEC is aligned (Table 3.4). This is most often the case in countries with an integrated ECEC system.

Table 3.4. Provision of initial education for child care and pre-primary staff³

Integrated	Split
Czech Republic*, Denmark, Finland, Israel*, Italy*, New Zealand**, Slovak Republic*, Sweden**	Australia, Belgium, British Columbia (CAN), Germany, Hungary, Korea, Manitoba (CAN), Netherlands, Norway**, Poland, Prince Edward Island (CAN), Slovenia, Scotland (UKM)

* Students follow the same education programme, but a specialisation in either child care or pre-primary education is added to the initial education programme.

** Data on New Zealand refers to Education and Care teachers only, excluding play centre leaders. Data on Norway refers to child/youth workers and pedagogical leaders who have a different initial education. Data on Sweden refers to preschool teachers only who work with one-to-seven-year-olds.

Note: Belgium refers to the Flemish Community and French Community of Belgium.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Mandatory professional development

Mandatory professional development can ensure that staff remain up-to-date on their knowledge of ECEC and child development and can ensure a stable level of quality. Professional development is more frequently mandatory for kindergarten/teaching staff than

for care centre staff or staff in caring positions (Figure 3.2, Panels A and B). Finland is one of a few countries where the uptake of professional development is mandatory for all staff in ECEC. In both Sweden and New Zealand, staff are not obliged to take up training when working in ECEC.

Very few countries report professional development opportunities for family day care staff (Figure 3.2, Panel C). Finland and the Flemish Community of Belgium both reported that it is mandatory for family day care staff to complete in-service training.

Sharing of costs of professional development

Sharing of costs of professional development makes participation less expensive for the individual and might also increase uptake. The costs of in-service training in Finland and Sweden are shared between the government, the employer and the employee. In New Zealand, ECEC workers do not have to contribute to the costs of professional development. In Finland, the government and employer bare all the training costs for mandatory professional training of family day care staff. Family day care staff can also participate in training on their own costs.

Figure 3.2. Mandatory nature and funding of professional development

Panel A. For preschool/kindergarten staff			
	Government	Employer	Individual
Australia	X	X	X
Austria*	X	X	X
Belgium (Flemish and French)	X		
Czech Republic**	X	X	X
England (UKM)	X		
Estonia*	X	X	X
Finland*	X	X	X
Georgia* (USA)	X	X	
Hungary*	X		X
Ireland	X		
Israel			X
Italy	X	X	X
Japan*	X	X	X
Korea	X	X	X
Manitoba (CAN)*	X	X	X
Massachusetts (USA)	X	X	
Mexico*	X		
Netherlands	X	X	X
New Zealand	X	X	
North Carolina* (USA)	X	X	X
Norway	X	X	
Oklahoma* (USA)	X		
Poland	X	X	X
Portugal	X	X	X
Prince Edward Island (CAN)*	X	X	X
Slovak Republic*	X	X	X
Slovenia*	X	X	X
Spain*	X	X	X
Sweden	X	X	X
Turkey	X		X

Panel B. For child care staff			
	Government	Employer	Individual
Australia	X	X	X
Austria*	X	X	X
Belgium (Flemish and French)	X		
British Columbia* (CAN)	X	X	X
Czech Republic		X	
England (UKM)	X		
Finland*	X	X	X
Hungary*	X		
Ireland			X
Israel			X
Italy		X	X
Japan	X	X	X
Korea*	X	X	X
Manitoba (CAN)	X	X	X
Mexico*	X		
Netherlands	X	X	X
New Zealand	X	X	
Norway**	X	X	
Poland	X	X	X
Prince Edward Island (CAN)*	X	X	X
Scotland (UKM)	X	X	X
Spain*	X	X	X
Sweden**	X	X	X

Panel C. For domestic day care staff			
	Government	Employer	Individual
Finland*	X	X	a
Flemish Community (BEL)*	X	a	a
French Community (BEL)	X	a	a
Italy	a	X	X

Notes: * Staff uptake of professional education is compulsory at the individual level. In countries without *, uptake of professional development by staff is voluntary. For Finland's domestic day care staff, training costs for family day carers are divided between government and employer. There are also possibilities for an employee to participate in professional development at their own cost. ** For Czech Republic, training is only mandatory for directors of preschools/kindergartens. For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Broad professional development provision

Many countries have a wide range of providers of professional development, including government, employers, university/colleges and non-governmental institutions. For kindergarten/teaching staff, professional development is most often provided by universities

or colleges; while, for child care staff or staff in caring positions, professional development is mostly offered by non-government-related providers (Figure 3.3).

Having integrated ECEC systems, the providers of professional development do not differ between teaching staff and staff in child caring positions in Finland, New Zealand and Sweden. In all three countries, professional development is offered in universities or colleges and non-governmental providers. Additionally, in Finland, the government and the employer also provide professional training; the employer does so as well in Sweden.

Figure 3.3. Providers of professional development

Panel A. For kindergarten or preschool staff					Panel B. For child care staff				
	Government	Employer	University / college	Non-government		Government	Employer	University / college	Non-government
Australia	a	X	a	X	Australia	a	X	a	X
Austria	X	X	X	X	Austria	X	X	X	X
British Columbia (CAN)	X	X	X	X	British Columbia (CAN)	X	X	X	X
Czech Republic	X	X	X	X	Czech Republic	a	X	a	a
Denmark	a	a	X	a	Denmark	X	a	a	a
England (UKM)	X	a	X	X	England (UKM)	X	a	X	X
Estonia	X	X	X	X	Finland	X	X	X	X
Finland	X	X	X	X	Flemish Community (BEL)	a	a	X	X
Flemish Community (BEL)	a	X	X	X	French Community (BEL)	a	a	a	X
French Community (BEL)	a	X	a	a	Georgia (USA)	X	a	X	X
Georgia (USA)	X	X	a	a	Hungary	X	a	X	a
Hungary	X	a	X	a	Ireland	X	a	a	a
Ireland	X	a	a	a	Israel	X	a	X	X
Israel	X	a	X	a	Italy	X	a	a	X
Italy	X	X	X	X	Japan	a	X	X	X
Japan	X	X	X	X	Korea	X	X	X	X
Korea	X	X	X	X	Massachusetts (USA)	a	X	X	X
Manitoba (CAN)	X	X	X	X	Manitoba (CAN)	X	X	X	X
Massachusetts	X	X	X	X	Mexico	X	X	a	X
Mexico	X	a	a	a	Netherlands	a	X	X	X
Netherlands	a	X	X	X	New Zealand	a	a	X	X
New Zealand	a	a	X	X	Norway*	X	X	X	X
North Carolina (USA)	X	X	a	a	Poland	a	X	X	X
Norway	X	X	X	X	Prince Edward Island (CAN)	X	X	X	X
Oklahoma (USA)	X	X	a	a	Scotland (UKM)	X	X	X	X
Poland	X	X	X	X	Spain	X	X	X	X
Portugal	X	X	X	X	Sweden*	a	X	X	X
Prince Edward Island (CAN)	X	X	X	X					
Scotland (UKM)	a	X	X	X					
Slovak Republic	X	X	X	X					
Slovenia	X	X	X	X					
Spain	X	X	X	X					
Sweden	a	X	X	X					
Turkey	X	a	X	X					

* For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Note: "Non-government" refers to professional training institutions, churches, community organisations, etc.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Provision of professional development in different formats

By providing different formats of professional development opportunities, more staff might be able to participate in or take up training. Online training, for example, might attract more participants since staff can participate in from home, and seminars and workshops are also attractive since they require short-term input.

Different formats can have different purposes, and depending on what the training is about as well as the needs of staff, one format might be more suitable than another and/or more effective. On-site mentoring can be costly, but highly effective since it is based on one-on-one learning. The different formats are not mutually exclusive but can complement each other. Most countries use a face-to-face approach: seminars, workshops and formal training courses are popular in the ECEC sector. Online training is less frequently offered.

Finland offers professional development through seminars or workshops, on-site mentoring and formal training courses; while Sweden indicated that it only offers formal training courses. New Zealand offers seminars, workshops and onsite mentoring and is the only one of the three countries to offer online training possibilities.

Table 3.5. Forms and structures of professional development opportunities

		Staff type	
		Kindergarten or preschool staff	Child care staff
Training programme form and structure	Seminar or Workshop	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), French Community (BEL), Israel, Italy, Japan, Korea, Massachusetts (USA), Manitoba (CAN), Mexico, Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain and Turkey	Australia, Austria, British Columbia (CAN), Czech Republic, Finland, Flemish Community (BEL), French Community (BEL), Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
	Onsite Mentoring	Australia, Austria, Czech Republic, Denmark, Estonia, Finland, Flemish Community (BEL), Georgia (USA), Ireland, Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, North Carolina (USA), Norway, Oklahoma (USA), Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia and Spain	Australia, Austria, British Columbia (CAN), Czech Republic, Denmark, Finland, Flemish Community (BEL), Georgia (USA), Israel, Italy, Japan, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
	Online Training	Australia, Czech Republic, Denmark, Estonia, Georgia (USA), Ireland, Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, North Carolina (USA), Norway, Poland, Portugal, Prince Edward Island (CAN), Slovak Republic and Spain	Australia, British Columbia (CAN), Czech Republic, Georgia (USA), Israel, Italy, Korea, Manitoba (CAN), Massachusetts (USA), Netherlands, New Zealand, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Spain
	Formal Training Course	Australia, Austria, Czech Republic, Denmark, England (UKM), Estonia, Finland, Flemish Community (BEL), French Community (BEL), Georgia (USA), Israel, Italy, Japan, Korea, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, North Carolina (USA), Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovenia and Sweden	Australia, Austria, British Columbia (CAN), Czech Republic, England (UKM), Finland, Flemish Community (BEL), Georgia (USA), Israel, Italy, Manitoba (CAN), Massachusetts (USA), Mexico, Netherlands, Norway*, Oklahoma (USA), Poland, Prince Edward Island (CAN), Scotland (UKM) and Sweden*

* For Norway, data regarding child care refers to child/youth workers. For Sweden, data regarding child care refers to childminders.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Different incentives for uptake of professional development

Staff participation in professional development is affected by the incentives for undertaking these activities, such as support on cost coverage, financial support in covering a loss of partial salary when taking up training, the possibility to obtain a higher qualification, support in the form of time off for participation in training, or receiving an increase in salary or other forms of promotion after participation.

The most commonly used incentives to encourage the uptake of professional development in ECEC include financial support to cover training costs, followed by pathways to obtain a higher qualification, and granting study leave to workers participating in professional development. A greater variety of incentives are in place for teaching/kindergarten staff than for child care or family day care staff.

In Finland and Sweden, financial support to cover training costs and partial loss of salary, attainment of higher qualifications, and study leave are employed as incentives for ECEC

staff to take up professional development. New Zealand offers financial support to cover training costs and a path to higher qualifications for ECEC staff. None of the three countries provides staff with some form of promotion after participating in training.

Table 3.6. Incentives for ECEC workers to take up professional development

By type of provision

	Financial support for training costs		Financial support to cover partial salary		Path to higher qualification		Study leave		Higher salary/promotion	
	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school	Child care	Pre-school
Australia	X	X								
Austria	X	X					X	X		
British Columbia (CAN)*	X	X	X				X	X	X	X
Czech Republic	X	X				X		X		
Denmark						X		X		X
England (UKM)	X	X			X	X				
Estonia		X						X		X
Finland	X	X	X	X	X	X	X	X		
Flemish Community (BEL)		X				X		X		
French Community (BEL)	X	X		X	X			X		
Georgia (USA)		X			X					
Germany							X	X	X	X
Hungary	X	X								
Italy							X	X		
Japan	X	X		X		X		X		
Korea	X	X								X
Manitoba (CAN)	X	X	X		X	X	X		X	X
Massachusetts (USA)		X					X			
Mexico	X	X								X
Netherlands	X	X	X	X	X	X	X	X	X	X
New Zealand	X	X			X	X				
North Carolina (USA)		X								
Norway*	X	X			X	X				
Oklahoma (USA)										
Poland	X	X			X	X	X	X	X	X
Portugal		X		X		X		X		X
Prince Edward Island (CAN)*		X				X				X
Scotland (UKM)					X					
Slovak Republic				X		X				X
Slovenia	X	X	X	X	X	X	X	X	X	X
Spain	X	X			X	X	X	X	X	X
Sweden*	X	X	X	X	X	X	X	X		
Turkey						X				X

* For British Columbia (CAN), incentives for uptake of professional development can differ per employer. For Norway, data regarding child care refers to child/youth workers. For Prince Edward Island (CAN), data refers to entry-level ECEC staff. For Sweden, data regarding child care refers to childminders.

Note 1: "Path to higher qualification" refers to the availability of higher qualification through professional development. In some countries, higher qualifications are not available for the ECEC workforce; whereas in other countries, higher qualification is available and may be obtained through professional development.

Note 2: "Study leave" includes permitted time off from work to pursue professional development and replacement of an employee with a substitute.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Professional development covering a broad range of topics

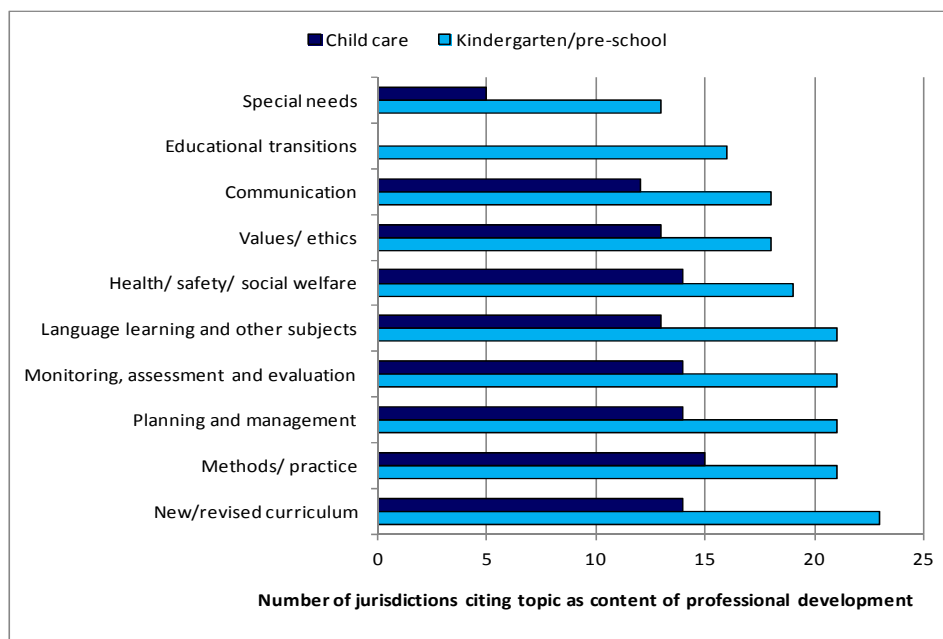
Professional development can be offered or focus on different subjects or topics (Figure 3.4). The focus or content of professional development is on “new or revised curriculum” in early education, while it is on “methods and practice” in child care-related jobs. Planning and management is a popular subject in training as are monitoring, assessment and evaluation. Development in management, planning and leadership are important for the quality of ECEC. The absence of a cohesive leadership strategy or good management can be a significant risk to improving quality in ECEC.

Special needs is the least frequently cited topic of professional development. Training on educational transitions is offered to staff that work with older children who are closer to the primary schooling age, mostly teaching staff/kindergarten teachers. Training in this ensures a smooth transition from ECEC to primary schooling.

Professional development in Finland is offered on all subjects listed in Figure 3.4. Although Finland offers training on planning and management, the country indicated it faces challenges related to leadership in ECEC. This might be the cause, but other possible causes include low uptake in training on these subjects and insufficient tools to implement leadership and management knowledge or skills.

Sweden focuses largely on curriculum and curriculum subjects in professional development but also on monitoring and assessing. On the contrary, New Zealand has a large focus on staff methods and practices during in-service training and the special needs of children. Monitoring, assessment and evaluation are also a focal point of training in New Zealand.

Figure 3.4. Content of professional development⁴



Note 1: Countries were given a range of topics to select from, including the possibility to list topics not mentioned in the selection. Answers indicating “other” without specifying which topic was referred to with “other” are not included in this figure.

Note 2: For countries with an integrated ECEC system that indicated that the subjects of professional development were similar for the whole ECEC sector/ECEC age range, responses have been included in both “child care” and “kindergarten/preschool” since the content of professional development refers to the whole ECEC age range, including ECEC workers with younger children (herein referred to as “child care”).

Source: OECD Network on Early Childhood Education and Care’s “Survey for the Quality Toolbox and ECEC Portal”, June 2011.

Favourable staff-child ratios which provide good working conditions for staff

Staff-child ratio plays an important role in determining an optimal working environment for ECEC staff. Countries set different minimum standards for staff-child ratios for staff working with younger children and staff working with older children. When the number of children per staff member is low, more intensive care and active interaction between young children and ECEC staff is possible.

Children in kindergarten and preschool (or children in the older age bracket⁵) tend to have less staff per child than those in care centres (or children in the age category zero to three⁶) (Figure 3.5). This goes well with the research finding that closer supervision and care matter more for younger children than older ones.

Across 19 OECD countries⁷, on average, it is regulated that a kindergarten or preschool staff member can have, at most, 18 children; while a child care staff member, on average, can have only seven children at most in a child care centre

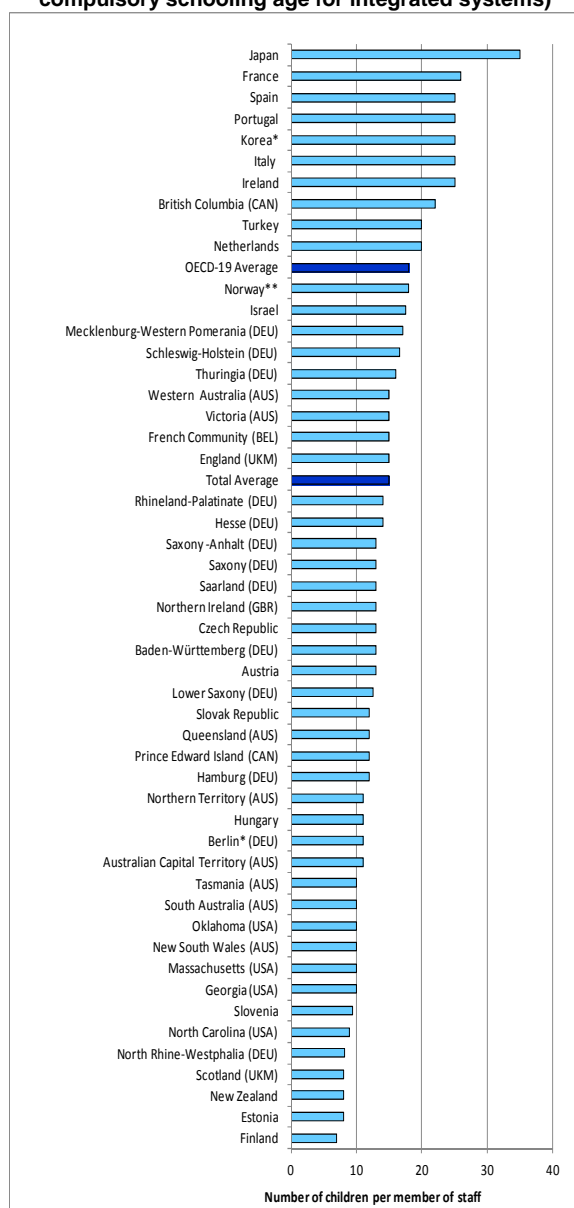
Family or domestic care services tend to be regulated with stricter staff-child ratios than kindergarten/preschool or child care centres, and there is little data available on family day care. The average ratio, among the countries with available data, is five children per staff (Figure 3.6).

Finland has the most favourable staff-child ratios among responding countries with four children per member of staff working with younger children, a ratio of 1:7 in ECEC services for three-to-six-year-olds, and a ratio of 1:4 in domestic care.

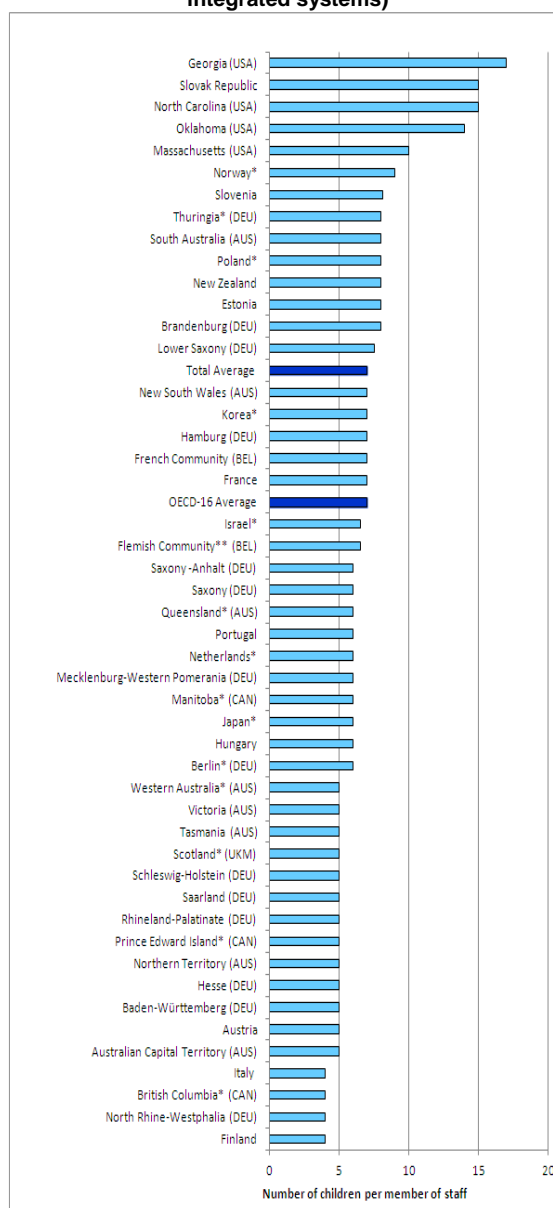
New Zealand has a marginally less favourable ratio for kindergartens with eight children per member of staff. Sweden is one of the few countries where there is no regulated staff-child ratio in place, although the actual staff-child ratio remains low in Sweden.

Figure 3.5. Regulated maximum number of children per staff member in ECEC

Panel A: In kindergarten or preschool (three years to compulsory schooling age for integrated systems)



Panel B: In child care (zero-to-three-year-olds for integrated systems)



* Jurisdictions with separate regulations for staff-child ratio for different age groups, the data given is based on: 3-6-year-olds attending for 5-7 hours per day regarding Berlin; and 4-year-olds regarding Korea.

** The figure for Norway applies only to qualified kindergarten teachers, whereas regulation stipulates that if other staff will also be present in the kindergarten setting, the number of children per member of staff is effectively lower. The figure for Norway is based on regulation for 3-6-year-olds.

* Jurisdictions with separate regulations for different age groups, the data given is based on: Berlin (DEU), 2-3-year-olds (attending 5-7 hours per day); British Columbia (CAN), 0-3-year-olds; Israel, 2-3-year-olds; Japan, 1-2-year-olds (while the country has different ratios in place for different ages: the ratio for age 0 is 1:3; age 1-2, 1:6; age 3, 1:20; and age 4, 1:30 – only data regarding 1-2-year-olds is included in the figure); Korea, 2-year-olds; Manitoba (CAN), 2-3-year-olds; Netherlands, 2-3-year-olds; Norway, 0-3-year-olds; Prince Edward Island (CAN), 2-3-year-olds; Queensland (AUS) 2-3-year-olds; Scotland (UKM), 2-3-year-olds; Thuringia (DEU), 2-3-year-olds; Western Australia (AUS), 2-3-year-olds. For Poland, when there is a disabled child in the playroom, the ratio is set at 1:5.

**Subsidised facilities only

Note: Countries who reported averages for staff-child ratio instead of a minimum requirement in the Survey have not been included in the graphs, as averages do not constitute a regulated minimum requirement. When regulated ratios were indicated as maximum number per children per multiple staff members (e.g., 2:15), the number included in the figure has been calculated based on the maximum number of children for one member of staff (e.g., 2:15 has been re-calculated into 1:7.5).

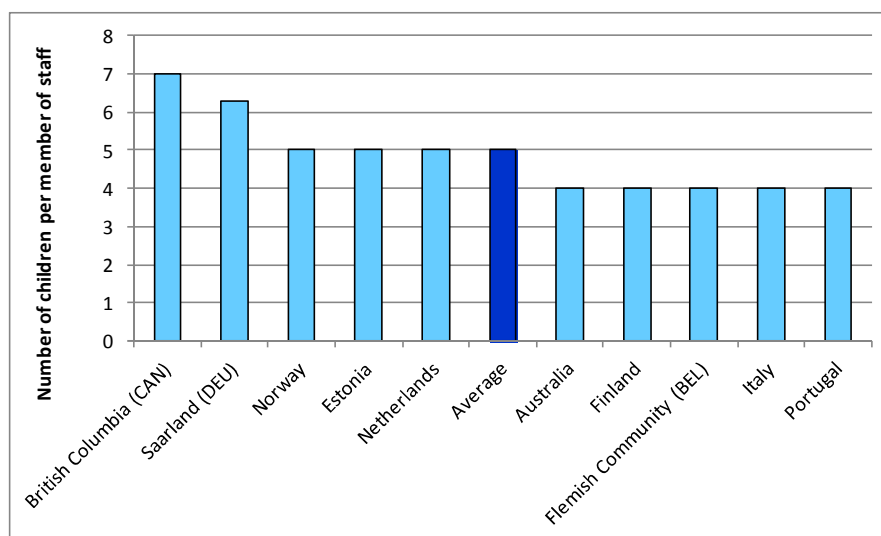
Note on Panel A: OECD-19 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Czech Republic, Estonia, Finland, France, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain and Turkey.

Note on Panel B: OECD-16 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Estonia, Finland, France, Hungary, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic and Slovenia.

The Total Average is based on data for all countries and jurisdictions included in the respective figures.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Figure 3.6. Regulated maximum number of children per care giver in family of domestic care



Note: Countries who reported averages for staff-child ratio instead of a minimum requirement in the Survey have not been included in the graphs, as averages do not constitute a regulated minimum requirement. For Australia, the figure is based on the maximum number of children per caregiver in family day care for children below the compulsory schooling age. For the Flemish Community of Belgium, data regards subsidised Family Day Care Centres only.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Potential areas for reflection

The following potential areas for reflection are identified as a result of desk-based international comparison without stakeholder's views, such as through a country visit, due to the constraints of the working methods involved.

Licensing of professionals

ECEC practitioners most often need a licence to work in the ECEC sector. Licensing can be obtained by demonstrating the abilities to practice the profession or duties in ECEC. A renewal of licence might provide opportunities to identify development or training needs and can contribute to ensuring a high-quality workforce supply.

Whether the licence requires renewal after a certain period of time differs greatly among respondents (Table 3.7). More countries require licensing renewal for kindergarten teachers/teaching staff than for child care workers/staff with caring responsibilities or family day care staff.

After first being awarded relevant qualifications, no renewal is required for any ECEC staff in Finland. In New Zealand, both kindergarten teachers and play centre leaders need to renew their licence every three years.

Table 3.7. Renewal of licences of practitioners in ECEC by staff type

	Kindergarten or preschool teacher	Child care staff	Family or domestic child carer
More than every 5 years	Flemish Community (BEL), Japan		
Every 5 years	British Columbia (CAN), Georgia (USA), Massachusetts (USA), North Carolina (USA), Oklahoma (USA)	British Columbia (CAN), Scotland (UKM)	Germany
Every 3 years	New Zealand	New Zealand	Prince Edward Island (CAN)
Every year			Manitoba (CAN)
No renewal required	Finland, Germany, Italy, Korea, Manitoba (CAN), Mexico, Norway, Poland, Slovenia	Finland, Germany, Italy, Japan, Korea, Manitoba (CAN), Mexico, Poland	Finland, Italy, Poland

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Reflection upon development areas in response to changing needs or societal changes

Leadership

Finland indicated there is a need for action on leadership development specifically for ECEC. Although staff are trained on management and planning during their initial education, and it is possible to participate in in-service training on this, Finland faces challenges in developing leadership skills and competences.

Although there is an increasing need for the development of leadership skills in many OECD countries, leadership has received only intermittent attention by early childhood theorists and researchers. Besides this, there might be a lack of awareness among ECEC staff and managers of the importance of leadership skills. However, leadership is of great relevance in ensuring a high-quality workforce and ECEC provision, as leadership strengthens staff performance and can stimulate staff to participate in ongoing professional development.

ICT

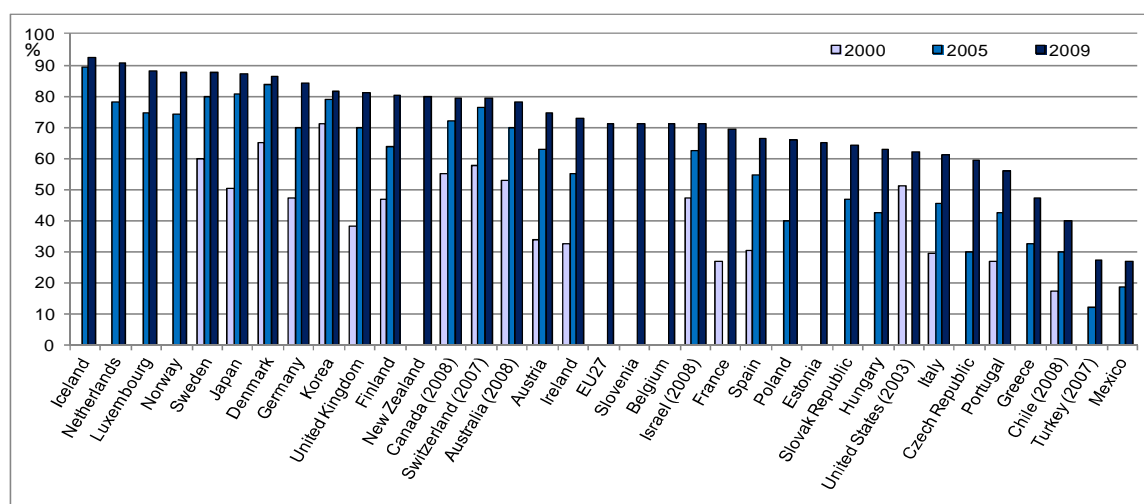
Information and communication technology (ICT) has developed rapidly over the past 40 years. ICT has now become part of our everyday lives. Access to computers at home grew rapidly in OECD countries between 2000 and 2009, although discrepancies can be observed across different countries. In Finland and New Zealand, around 80% of households have access to a computer, while this is over 90% in Sweden (Figure 3.7.).

Besides this, the use of computers in education and schooling is becoming more popular. Finland, New Zealand and Sweden experienced an increase in the number of computers per student between 2000 and 2009 (Figure 3.8.).

Since computers are increasingly being used in households and schools and are becoming a more important part of people's everyday as well as professional lives, staff are now expected to integrate the use of ICT into their professional practice and to keep up to date with ICT developments and applications. ICT can foster many benefits, including helping children visualising abstract issues or learn how to read; and it improves children's technological skills. ICT might therefore be a subject for professional development for ECEC staff, since children learn about ICT from a very young age onwards.

Figure 3.7. The use of ICT in the home environment (including PC, portable and handhelds)

Households with access to computer at home as percentage of all households

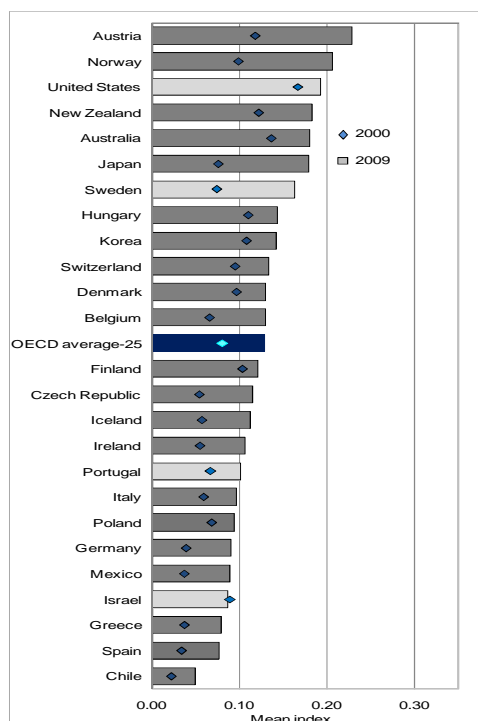


Note: Generally, data from the EU Community Survey on household use of ICT, which covers EU countries plus Iceland, Norway and Turkey, relate to the first quarter of the reference year. For the Czech Republic, data relate to the fourth quarter of the reference year. Statlink: <http://dx.doi.org/10.1787/888932321530>.

Source: OECD, ICT database and Eurostat, Community Survey on ICT usage in households and by individuals, July 2010.

Figure 3.8. The use of ICT in schools (including PC, portable and handhelds)

Computer-per-student ratio at school in PISA 2000 and 2009



Note: Countries are ranked in descending order of the computers-per-student ratio in 2009. Countries where differences between 2000 and 2009 are statistically significant are marked in a darker tone.

Source: PISA 2009 Database, Tables VI.5.8a and b.

Mother-tongue language teaching

In almost all OECD countries, the foreign-born population has increased between 1990 and 2010. In New Zealand, the share of the population with an immigrant background is among

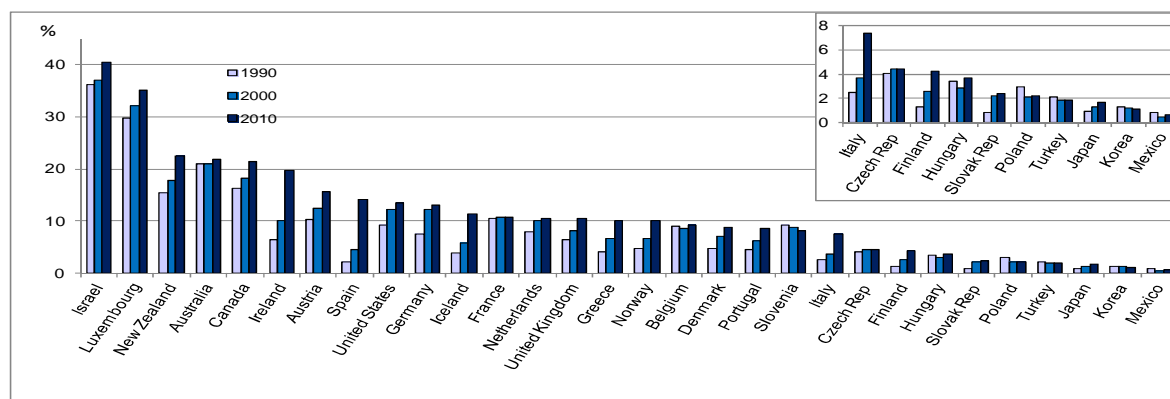
the highest in the OECD. In Finland, although the share is lower than New Zealand's, the proportion of immigrants has more than doubled between 1990 and 2010 (Figure 3.10).

OECD PISA studies found that there are large and significant differences in reading performances between 15-year-old native students and first-generation and second-generation immigrant students in many OECD countries (Figure 3.11). Especially minority and immigrant groups with linguistic backgrounds different from the native language might experience difficulties in language and reading development.

In Finland, there are large differences in reading performance between students without an immigrant background and first- and second-generation immigrant students. To ensure that children learn the mother-tongue language properly at a young age, it is important for staff to have good knowledge of the mother-tongue language as well as great understanding and respect for other cultures.

Figure 3.9. Immigrant population

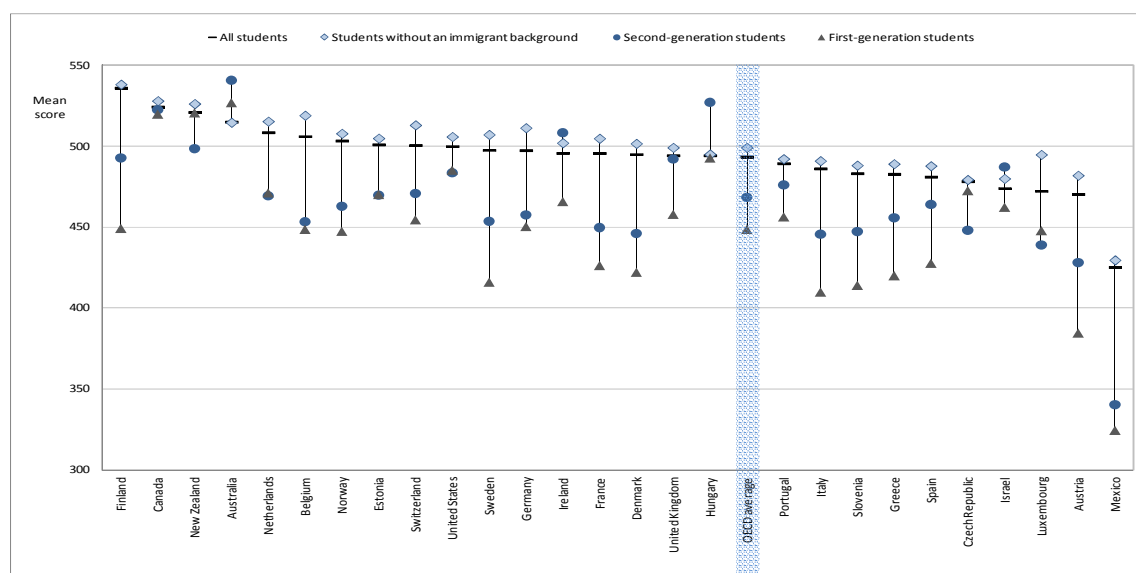
Trends of international migrants (as a percentage of the total population in 1990, 2000 and 2010)



Note: International migrants are defined as individuals whose country of birth is not that in which they reside. Statlink: <http://dx.doi.org/10.1787/888932320732>

Source: OECD (2010), *Trends shaping education*, 2010.

Figure 3.10. PISA reading performance by immigrant students



Note: Countries are ranked in descending order of the mean score of all students.

Source: OECD PISA 2009 Database, Table II.4.1.

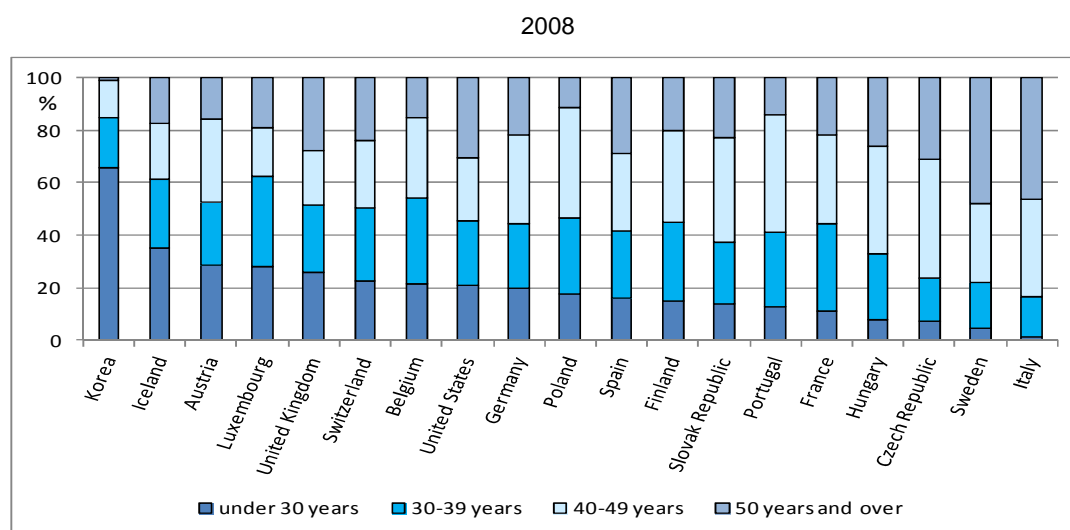
Ageing workforce population

The age distribution of pre-primary education teachers varies among OECD countries, especially for under-30-year-olds and 50-year-olds and over (Figure 3.7). The age distribution of ECEC staff is generally found to skew towards older personnel, but more clearly is the predominance of women in the sector.

In Finland, less than 15% of pre-primary staff are below the age of 30, whereas more than 50% are above 40. This is significantly lower than in Sweden where 78% of staff is above 40, although in both countries pre-primary staff are relatively “old”.

An ageing population in ECEC might be related to the unattractiveness of working in the sector where pay is often low and development opportunities are not always available. It might also indicate that there is high staff turnover rate: young people work for a short period of time in the ECEC sector and quickly move on to work in a different job.

Figure 3.11. Age distribution of pre-primary education teachers

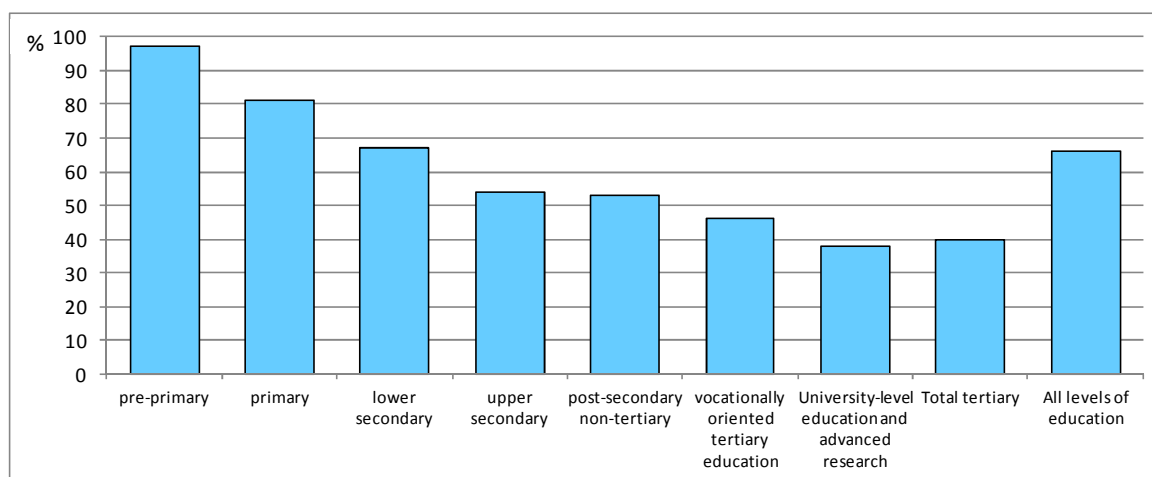


Source: OECD Education Database, June 2011.

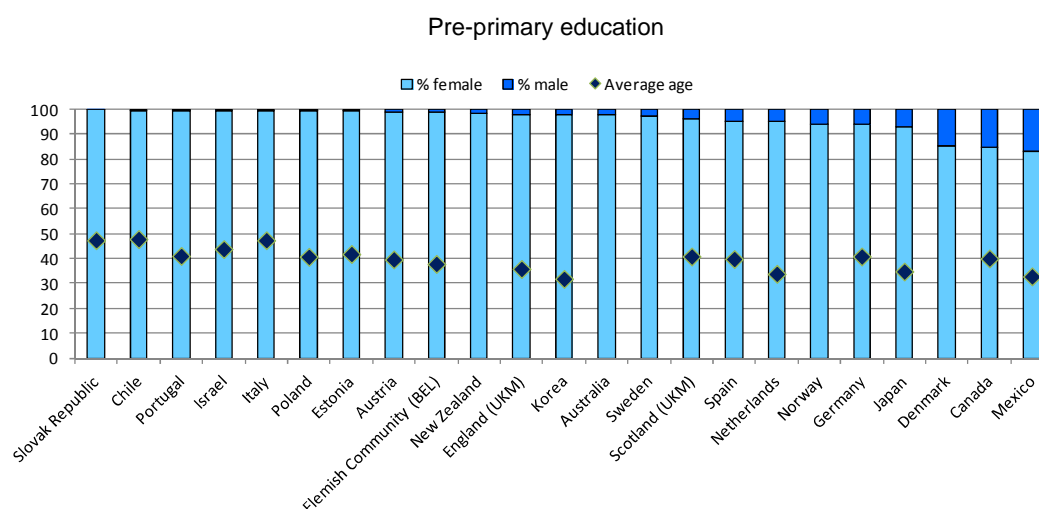
Highly gender-characterised sector

Many countries are concerned that the proportion of males in teaching is significantly low. Looking at all levels of education, women represent an average of over 66% of teachers in OECD countries, but the percentage of female staff tends to differ significantly between sectors. The younger the children educational staff works with, the higher the proportion of female staff: women account for almost 97% of teachers at the pre-primary level; over 80% at the primary level; slightly more than 53% at the upper secondary level; and 40% in tertiary education (Figure 3.12).

In most countries, the median proportion for female pre-primary and pedagogical staff is 95% or higher. In Finland, 98.6% of ECEC staff is female. Both New Zealand and Sweden also have a very high proportion of female staff in ECEC (98.4% and 97% respectively).

Figure 3.12. Percentage of female teaching staff by level of education

Source: OECD (2010), Education at a Glance 2010

Figure 3.13. Teacher (or pedagogue) staff profiles

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

Increasing incentives for recognition of prior learning

Recognition of prior learning (RPL) is used by a number of countries as a tool to recognise professional development or any skills and knowledge acquired through informal and non-formal learning. Countries using RPL see it as a tool to up-skill the workforce, and as a means to recruit and qualify staff. In child care-related positions, qualifying the unqualified is more common than in preschool/kindergarten. RPL is used in the family day care sector as well, although only in a few countries.

Finland recognises prior learning in order to provide qualifications to unqualified personnel but only in family day care and for staff in caring positions. New Zealand recognises prior learning in order to recruit ECEC staff.

To ensure a stable workforce supply and decrease turnover rates, it might be an option for Finland to consider implementing other incentives for RPL, not only in family day care or for staff in caring positions but also for staff in educational positions.

Table 3.8. Incentives for recognition of prior learning (RPL)

	Upskill			Recruitment			Qualify the unqualified		
	Child care	Pre-school	Family day care	Child care	Pre-school	Family day care	Child care	Pre-school	Family day care
Australia	X		X				X		X
British Columbia (CAN)				X	X				
Denmark								X	
England (UKM)							X		
Finland							X		X
Flemish Community (BEL)	X	X					X		
Germany	X	X	X						
Israel				X	X				
Italy	X	X	X						
Korea	X	X							X
Manitoba (CAN)	X	X	X	X	X				
Massachusetts (USA)							X		
Netherlands							X		X
New Zealand				X	X				
Scotland (UKM)							X		
Slovenia							X		
Spain							X		
Turkey		X			X			X	

Note: For the Flemish Community (BEL), data refers only to subsidised child care provisions.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

NOTES

- 1 The findings presented in chapter 3 are based on data from the OECD Network on ECEC's "Survey for the Quality Toolbox and ECEC Portal" (2011), and on the OECD's desk-based research. For each graph and table, the countries or regions for which data is used are listed (if not presented in the graph).
- 2 The international ISCED classification system is often used to facilitate international comparisons, four of which are relevant to the OECD survey responses: Level 2: Lower secondary school – normally considered the end of basic education; Level 3: Upper secondary school – normally the end of compulsory education; Level 4: Post-secondary non-tertiary education (e.g., short vocational programs; pre-university courses); Level 5: First stage tertiary education (e.g., first university degree); Level 6: Second stage of tertiary education (leading to an advanced research qualification).
- 3 Integrated initial education: initial education for child care and pre-primary staff is integrated; students follow the same education, *i.e.*, students are being educated for working in child care and the early education sector (although a further specialisation for either child care or early education might exist within the programme). Split initial education: initial education for child care and pre-primary staff is split: they do not follow the same education and are trained separately. Data refers to centre-based ECEC workers only (excluding family day care workers).
- 4 For kindergarten/preschool, based on data from: Australia, Austria, British Columbia (CAN), Czech Republic, England (UKM), Estonia, Finland, Ireland, Israel, Italy, Japan, Manitoba (CAN), Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Prince Edward Island (CAN), Scotland (UKM), Slovak Republic, Slovenia, Spain, Sweden and Turkey. For child care, based on data from: Australia, Austria, British Columbia (CAN), Czech Republic, Finland, Israel, Italy, Japan, Manitoba (CAN), Mexico, Netherlands, New Zealand, Norway, Prince Edward Island (CAN), Scotland (UKM), Spain and Sweden.
- 5 When referring to kindergarten or preschool in countries with an integrated ECEC system, data refers to the children in the older age bracket of ECEC, *i.e.*, children from the age of three to the age that primary schooling starts (unless indicated otherwise).
- 6 When referring to child care in countries with an integrated ECEC system, data refers to the children in the youngest age group of ECEC, usually zero-to-three-year-olds (unless indicated otherwise).
- 7 OECD averages are only based on data reported for OECD countries in the respective figures, excluding regions and territories. Data from jurisdictions and regions, as well as countries, are included in the Total Average.

CHAPTER 4

WHAT ARE THE CHALLENGES AND STRATEGIES?

Common challenges countries face in enhancing quality in ECEC workforce include: 1) improving staff qualifications; 2) securing a high-quality workforce supply; 3) retaining the workforce; 4) workforce and leadership development; and 5) managing the quality of workforce in private ECEC provision.

Finland has made several efforts to tackle these challenges, mostly focusing on developing the workforce and improving staff qualifications through, for example, aligning qualifications between pre-primary and primary teachers and designing demands-driven training. To further their efforts, Finland could consider alternative strategies implemented by New Zealand and Sweden, such as adapting the same staff requirements for managers, diversifying the workforce by creating easier entry into the profession through the recognition of prior learning, providing practical support for staff and managers to guide them in their jobs, developing support kits for leadership positions, and monitoring staff quality through licensing renewal.

This chapter aims to identify alternatives Finland could consider when facing challenges in improving workforce quality. It first describes common challenges countries are facing. It then presents the different approaches Finland has been using to tackle the challenges. Lastly, it identifies strategies that Sweden and New Zealand have undertaken.

Common challenges

The OECD international survey on quality has identified five common challenges that countries often face in improving workforce quality: 1) improving staff qualifications; 2) securing a high-quality workforce supply; 3) retaining the workforce; 4) workforce development; and 5) managing the quality of workforce in private ECEC provision.

Improving staff qualifications

Qualifications for ECEC staff often overlap and are not transparent among child care workers and early education teachers. Different qualifications leading to different job titles/profiles do not always clearly communicate to staff or parents about what knowledge, skills and competencies staff have. Improving qualifications evenly across a country can also be a challenge due to local control over the contents of the education programmes.

Securing a high-quality workforce supply

Securing a high-quality workforce supply is a major challenge in many OECD countries. Chronic shortages of ECEC staff are observed, especially in remote and disadvantaged areas. Furthermore, lower qualification levels of the workforce, especially among the child care workers, often raise concerns among parents and policy makers about the quality of services. Additionally, there are often insufficient incentives for people to work in the sector. The main reasons for the shortages are often cited as: low wages, low social status, heavy workload and lack of career progression paths, which make the profession unattractive and can cause or contribute to the challenge of recruiting staff.

The ECEC workforce is most often homogeneous, composed of mostly female workers and from the majority ethnic group.

Retaining the workforce

Many countries experience difficulties with retaining the workforce, with particularly high staff turnover rates in the child care sector. The factors that keep people from working in the ECEC sector are often the same factors that discourage people from pursuing a career in the ECEC sector: low wages, low social status, heavy workload and lack of career progression paths.

Workforce and leadership development

Many countries offer some form of professional development opportunities for ECEC staff. However, the uptake rates are often found to be low. First and foremost, information about training opportunities may not be well known, or the benefits of participating may not be clearly articulated, especially among low-qualified ECEC workers. Second, continuous training and professional development might be disconnected from what they wish to learn, and, therefore, they may not be motivated to pursue training. Thirdly, there is an increasing need of staff and managers to be trained in leadership, whether it be in the playroom or leading an ECEC centre. However, this poses a challenge for many countries.

Even when staff are informed of such opportunities and are motivated to take up training, their manager may be reluctant to send them to professional development courses. It is often argued that, when the training leads to the possibility of a higher level of qualification, staff may subsequently wish for a pay raise or leave for a higher paying job elsewhere.

Managing quality of workforce in different ECEC provisions

A challenge in many countries is managing the quality of the workforce to ensure that quality remains high or at least stable. This provides insights to where a country stands in terms of workforce, whether there are any issues regarding workforce, and the changes in workforce in ECEC. In countries where provision is largely public, workforce quality can be managed through direct government action; whereas when the private market delivers a significant proportion of ECEC services, action may need to be taken through regulation or incentives.

Finland's efforts

Finland has made several efforts to tackle the challenges.

To improve staff qualifications

Merging different examinations for staff in caring positions

In Finland, the education for practical nurses started in the 1990s. At that time, there was a call from the labour market for more flexible movement from one task to another. Formerly, there were several different examinations (childminder, day care nurse, rehabilitation nurse, nurse for the disabled, etc.), which are now merged into one broader examination with different sub lines to choose from.

Aligning qualifications between pre-primary and primary teachers

Finland raised the level of education for kindergarten teachers and connected it more closely to the level for primary school teachers. In 1995, kindergarten teacher education was moved to the university level, as classroom teacher training and other teacher training had already been established in universities. This change created greater synergy and interaction between training for ECEC professionals and training for primary school teachers to better support children's development and learning and foster co-operation between teachers during children's transition from kindergarten to primary school. One of the main lessons learned is that when kindergarten and primary teachers are trained in connection to one another, they can better support children's development and learning by knowing how to co-operate during children's transition from pre-primary to primary school.

Revising the curriculum for initial education

In Finland, the national curriculum for practical nurse training has been reformed. In this reform, the view points of ECEC have been taken into consideration more profoundly than in the former curriculum. Also, the national curriculum for family childminders has been reformed.

To secure a high-quality workforce supply

Setting minimum qualification standards for ECEC staff and management

Staff working in ECEC centres in Finland have different educational backgrounds. The number of workers with either a higher or lower qualification is laid down in legislations: at least one third of the staff must have a tertiary level degree (ISCED level 5), and the remaining staff must have at least an upper secondary education (ISCED level 3).

Depending on the job description, directors of day care centres are expected to have either kindergarten teacher qualifications and adequate management skills or an appropriate Master's degree, knowledge of early childhood education and adequate management skills.

Diversifying the workforce by having staff with different educational backgrounds

In Finland, ECEC centres have multi-professional staff with different educational backgrounds. Members of staff with different educational backgrounds work with the whole age range (children aged zero to six or seven years) since Finland has an integrated system of early childhood education and care. ECEC staff have degrees from universities, polytechnics, to upper secondary education and competence-based vocational training. Early child development is taken into consideration in all the various initial staff qualifications. A diversification of staff can have positive spill-over effects, since higher qualified staff can train or educate lower qualified staff about the (additional) knowledge they have, and lower qualified staff can learn from their higher qualified colleagues. However, a challenge that remains for Finnish ECEC staff is that the roles and responsibilities of different occupations (staff with different qualifications) are not clearly defined, which often results in a working environment where “everyone does everything”.

To retain workforce

Offering status of family day care equal to other forms of ECEC

Finland issued the Day Care Act in 1973, regulating family day care and legitimising this form of service as equal to other forms of ECEC services. Family childminders became employees of the local authority, as was the case with centre-based ECEC staff, and now have their own working contract as part of the general working contract for employees at the municipality. Prior to the act, family childminders worked privately. The act established them as part of the municipal ECEC services and permitted them to participate in service training and common events. Family childminders also follow the National Curriculum Guidelines for ECEC.

Providing career opportunities for promotion and mobility

The career development opportunities for ECEC staff in Finland are related to the educational level of the staff member. But there are also opportunities for promotion based on their experience and work at administrative level. As an example, a kindergarten teacher can be promoted to a centre manager, or a centre manager can be promoted to a manager on a municipal level.

To develop the workforce and leadership skills

Making continuous training a job requirement

In Finland, the annual amount of in-service training for employees in social welfare (including day care staff) should be three to ten days depending on the employee's basic education, the qualifications required for the job and the job description. This is laid down in the Act on amending the Social Welfare Act (50/2005). This Act also obligates local authorities to ensure and offer an adequate level of continuous training to ECEC staff. The goal of the obligation to continuous training is to maintain and renew the professional skills of the staff.

Focusing on professional development for quality enhancement

As of 1 August 2005, the Act on amending the Social Welfare Act (50/2005) in Finland has obligated local authorities to ensure an adequate level of continuous training in social welfare for different job positions, including ECEC staff. The annual amount of training is supposed to be three to ten days depending on the educator's basic education, the

qualifications required for the job, and the job description. The goal of the obligation to organise continuous training in social welfare is to develop and renew the professional skills of staff to enhance quality provision. The Act prescribes that continuous training should be methodical, and it should support the professional skills and respond to both short- and long-term needs for training. Municipalities are obligated to assess and analyse the skills and training needs of the personnel. The mode of organising the continuous training is up to each municipality. The training can be individual and/or workplace-specific, or it can be specified according to occupational groups.

Emphasising the importance of continuous training among staff and managers

Finland explicitly points out the importance of continuous learning, training and development for staff and management. The National Curriculum Guidelines on Early Childhood Education and Care recognises that professional and vocational knowledge and experience are the foundation for staff competences. The Guidelines denote that staff should document, evaluate and make efforts to continuously develop their work. Staff should be aware of the changing needs of ECEC and the new challenges created by technological advancement and participate in training on areas needed in relation to these changes and challenges.

Besides, the policy goals for staff education and the educational system are determined by the government every four years in the Development Plan for Education and Research. The latest plan is from 2011-16, and ensuring the availability of competent staff is a priority in this plan as is ensuring the availability of continuous training for staff.

Designing demands-driven training

In Finland, municipalities are responsible for determining the content of social welfare training; however, municipalities do not always maintain diversified know-how about the needs of the social welfare sector. Therefore, the government created centres of excellence on social welfare in 2002 to convey expertise to municipalities on this topic and ensure that training content is consistent and relevant. These centres of excellence work in close connection with universities and other education institutions.

Recognising the need for diversity training

Finland recognised a need to develop inclusive education and multicultural working methods for ECEC staff. From 2007-11, the University of Helsinki participated in the European Commission's project INCLUD-ED, which analyses educational strategies that contribute to overcoming inequalities and promoting social cohesion, as well as educational strategies that generate social exclusion, particularly focusing on vulnerable and marginalised groups.

Offering training for curriculum implementation

In Finland, regarding continuous training and development, municipalities (the providers of training) focus on the centre's child-specific ECEC plans, which are based on the national ECEC plan. They focus especially on the processes of drawing up the ECEC plans and the contents of the ECEC plans, such as parental engagement, interaction between the child and the adult, the environment, the child's ways of acting (how the child moves, plays, experiences art, explores, etc.), leadership and special needs of children.

Financing training costs

Finland provides state-funded in-service training and Continuous Professional Development (CPD) for teachers and other education personnel. Since 2010, the Ministry of Education and Culture has nearly doubled its funding for the CPD and in-service training of teachers and education personnel, including ECEC staff. Currently, a total of EUR 21 million is spent annually for this purpose. Additionally, the in-service training for employees in social welfare

(including day care staff) receives about 33% of its funding from the state. This training amounts to three to ten days per year depending on the employee's basic education, the qualifications required for the job and the job description. The state funding helps ensure that local authorities offer an adequate level of continuous training that maintains and renews the professional skills of ECEC staff.

In certain regions or cities in Finland, local municipalities cover for the costs of continuous development training. As an example, at the University of Tampere in the city of Tampere (Finland), needs-based continuous training is carried out in co-operation with the city and kindergarten staff (especially the leaders of ECEC services). Staff and leaders of ECEC centres indicate their needs for development, and based on these needs, training is developed. The trainings are usually programmes which last for six months up to one year. It is financed by the employer (the city/municipality).

Establishing partnerships between staff and parents

Finland has a profound approach to ensure that staff are up-to-date about children's development: staff are obliged to establish partnerships with parents. This involves participation that goes further than co-operation. According to Finland's National Curriculum Guidelines, educators have a key role in sharing the day-to-day education and care of young child with the parents. The nature of the relationship between parents and educators is an essential part of the child's well-being. It requires mutual, continuous and committed interaction between staff and parents in all matters concerning the child. Through this partnership, staff find out more about how the child develops and behaves outside of the ECEC environment, which helps staff in developing better skills and competences that can result in being better able to adapt the curriculum and pedagogical practices to children's needs.

To manage quality of workforce in different ECEC provisions

Regulating private and public provision similarly

Legislation in Finland, though decentralised, sets out strong and clear requirements for staff qualification and staff-child ratios, which apply to both public and private service providers. By regulating the minimum ISCED level for certain job functions, Finland assures that the level of workforce is equal across all ECEC provisions, whether they are public or private. Besides this, there is a minimum level of quality and working conditions assured, prescribing staff-child ratios for example.

Assessing the education and development needs of ECEC staff

The city of Helsinki (Finland) participated in the Multicultural Children and Adults in Day Care Project. The project gathered data on the opinions of day care staff working with multicultural children regarding their working conditions and identified staff needs for development. The study found that staff working with multicultural children have a need for more time for planning and implementation of educational activities for these children, such as additional linguistic instruction and other support for non-Finnish speakers. They also experience difficulties in communicating with parents and have a need for additional knowledge on religions and cultures influencing the children's development.

Additionally, Finland plans to undertake an assessment of the education of kindergarten teachers. Afterwards, the plan is to assess the education of other ECEC staff.

Possible alternative strategies: lessons from Sweden and New Zealand

Alternative approaches from other countries can provide “food for thought” in overcoming challenges.

To improve staff qualifications

Revising initial education programmes and developing new qualifications

In **New Zealand**, in 1986, child care services were transferred from the Department of Social Welfare to the Department of Education. A year after integrating the child care and education sectors, the government established the Diploma of Education (Early Childhood Education) as the benchmark teaching qualification for the newly centralised system. In 1988, the first three-year teacher training programme with cultural training components began to be phased in. In the early 1990s, the focus of the sector was on quality, training and funding. The shift towards a qualified workforce occurred at the same time as a strong increase in demand for ECEC and a rapid expansion of the workforce. When the government established the Diploma of Education as the benchmark teaching qualification for the newly centralised system, targets were set for the percentage of the workforce that was qualified (100% registered teachers). New Zealand found that this policy led to a significant increase in the cost of ECEC funding for the government. As a result, the government reduced its target of 100% registered teachers in the sector to 80%, deciding that achieving a minimum level of 80% registered teachers by 2012 will maintain sufficiently high standards across the sector.

In addition to this, there is a new, flexible specialist teaching qualification supported by the study awards available from 2011. The Postgraduate Diploma in Specialist Teaching¹, currently being developed by Massey University and the University of Canterbury, will have endorsements in: early intervention; deaf and hearing impairment; blind and vision impairment; learning and behaviour; autism spectrum disorder; and special learning needs.

In **Sweden**, in 2010, the government proposed that current degrees in education be replaced by four new professional degrees: preschool education, primary school education, subject education and vocational education. The new degrees will lead to greater clarity regarding the components of teacher education; and the preschool education programme will have a more specific direction to secure the supply of well-educated teachers. In 2011, the government introduced a new initial training programme to increase the supply of well-educated preschool teachers. The following decisions have been made:

- regulate preschool teachers as other teachers are regulated;
- clarify teacher qualifications;
- create a teacher certification process; and
- design a state authorisation system (senior subject teachers) to strengthen incentives for preschool teachers to advance the quality of activities and to pursue continuous education.

Adopting the same training requirements for managers and staff

Both managers and staff who work directly with children in **Sweden** are drawn from the education sector. Known as teachers or “pedagogues”, these staff have taken higher education courses (university or non-university level) usually lasting three-and-a-half years (seven semesters) and covering general education (sociology, arts and sciences), professional studies, including educational psychology and child development, and practical training with work placements in different types of settings.

Ensure qualifications cover key competences

Early childhood education teaching qualifications in **New Zealand** cover a range of key competencies required to work successfully in an early childhood education setting. These competencies cover, for example, *Te Whāriki*,² the New Zealand early childhood education curriculum; theories of pedagogy and teaching practice; the care and education of infants and toddlers; and how to work effectively in the New Zealand cultural context.

Setting graduating standards for initial education

New Zealand has Graduating Teaching Standards in place, which were set by the New Zealand Teachers Council (NZTC) in 2007 under the Education Act 139AE. Minimum standards of teacher education are ensured by the accreditation and approval of all teacher education programmes by the NZTC. All teacher education providers with programmes approved by the NZTC must demonstrate how they enable students to reach the Graduating Teacher Standards. Providers guarantee that students have met these standards and are “fit to be a teacher” when they graduate from the programme.

Reviewing initial education qualifications

Early childhood education qualifications in **New Zealand**, which are offered by universities, must be approved by the Committee on University Academic Programmes of Universities New Zealand. After approval, universities are allowed to offer the academic programmes and can start implementing them. The content and quality of qualifications are reviewed regularly by these agencies. When necessary or when there is a need, qualifications can be revised to reflect emerging content areas or changing societal or staff needs.

*To secure a high-quality workforce supply**Providing grants and scholarships to students and professionals*

In **New Zealand**, student grants and scholarships are provided for hard-to-staff professions, including ECEC, to help students and services meet the costs of pursuing an ECE qualification. A number of scholarships are available to students undertaking a programme of study to prepare them for teaching in Pasifika or Māori immersion services.

Funding initial education providers for teacher programmes in minority services

To ensure that staff in minority services are of high quality, the government in **New Zealand** funded expert assistance for initial teacher education providers who started developing programmes for preparing teachers to work in Pasifika and Māori immersion services: the assistance went to developing and implementing these programmes.

Validating existing competencies and providing support to allow easier entry into the profession

New Zealand recognises prior learning (RPL), and people can convert prior learning experiences into credits towards a recognised ECE qualification. The government has funded the use of RPL to help increase the supply of qualified and registered teachers.

As an example, the Ministry of Education, the Tertiary Education Commission and the New Zealand Teachers Council ECEC are co-operating with teacher education providers to develop initial education or bridging courses to help people, particularly Māori and Pasifika peoples, meet the entry criteria for initial teacher education courses.

Promoting a career in the ECEC sector

At the national level, **New Zealand** promotes ECEC teaching as a career to people who are potentially interested in early childhood education teaching and groups that are underrepresented in the workforce. The government and initial education providers supply broad information online about how people can become a teacher, what the initial education requirements are, salary and promotion opportunities and displays the advantages of working in the ECEC sector. The government also gives an overview of all institutions offering qualifications in ECEC, how to apply to such programmes, what the costs are and where to apply for financial support.

Promoting workforce mobility across different regions and different countries

New Zealand assesses foreign qualifications and offers a diploma in ECEC if it is comparable to New Zealand's benchmark qualification, the Diploma of Education, required for early childhood teachers. New Zealand also offers relocation grants and return-to-teaching allowances to assist qualified staff to move to areas where there is a shortage of staff, such as remote areas.

Implementing an induction process for new ECEC staff

In **New Zealand**, following verification of the qualification of graduated ECEC students and a police vetting, beginning staff gain provisional teacher registration and then embark on a two-year teacher induction process with a mentor teacher to oversee their programme. They must demonstrate to their mentor teacher through evidence of their teaching that they are able to meet the Satisfactory Teacher Dimensions. At the end of the two years, the mentor may recommend the teacher to the professional leader of the early childhood service as meeting the Satisfactory Teacher Dimensions. The professional leader then recommends the teacher to the New Zealand Teacher Council for full registration. There is Ministry of Education funding support for the first two years of the induction and mentoring programme. Once a teacher is fully registered, the registration needs to be renewed every three years.

Stimulating providers in hiring qualified staff

A new funding system, implemented in **New Zealand** in 2005, provides an incentive for ECEC services to increase the proportion of registered teachers employed. Since December 2007, teacher-led ECEC centres have been required to have at least 50% of their teachers with an ECEC qualification at diploma or degree level. The funding system supports ECEC centres in achieving this standard.

To retain workforce

Giving pay parity to kindergarten teachers with teachers at other levels of education

Pay parity between kindergarten teachers and primary school teachers in **New Zealand** has made ECEC teaching a more attractive occupation. A funding system that provides incentives for services to employ more ECEC-qualified registered teachers has meant that services can afford to pay better salaries and has significantly increased the number of registered teachers in the workforce, leading to more qualified teachers in early childhood education centres trained in curriculum and its implementation

Improving classroom conditions to improve working conditions

In 2004, **Sweden** granted an increase of SEK 2 million of state funding to local authorities for the employment of 6 000 additional preschool teachers and child assistants. The grant was intended to reduce class sizes and improve staff-child ratios to 1:5 on average for zero-to-

six-year-olds to improve the quality of ECEC and make working conditions for staff more favourable.

Assisting in negotiating for working conditions in the ECEC sector

In **New Zealand**, the government has historically taken responsibility for funding kindergarten teacher salaries and setting their conditions of service. While kindergarten teachers represent only a small part of the total ECEC workforce (12% in 2010), the government negotiates salaries on their behalf. Working conditions are negotiated between teachers and their employers, except for kindergarten teachers in which case the Ministry of Education negotiates their terms and conditions on behalf of kindergarten associations.

Targeting experienced workers and returning staff

New Zealand offers relocation grants and return-to-teaching allowances to assist qualified staff to get back into the profession and to move to areas where there is a high shortage of ECEC staff. The country also developed teacher education courses that allow primary teachers to upgrade their primary teacher qualifications to ECEC teacher qualifications.

Providing career opportunities for promotion and mobility

In **Sweden**, preschool teachers have the opportunity to be promoted as senior subject teachers after pursuing research studies to have a licentiate or doctoral degree. Preschool teachers can also work as preschool heads, school managers and municipal administrators.

Providing practical support for staff and management to guide them in their job

The curriculum framework for ECEC in **New Zealand** provides professionals with examples of experiences that help them in their everyday practices. The support guidance is divided into experiences helpful for infants, toddlers and young children to ensure that practices and activities are age-appropriate. It provides ideas for activities and what is important to keep in mind for staff working with children. It also sets out questions for reflection for staff members, which help professionals analyse what they could improve in their everyday work.

Additionally, the website of the Ministry of Education in New Zealand³ gives examples of practices staff can use in their ECEC centre, information on changes or examples of curriculum implementation and information on professional development programmes. The Ministry has its own official online magazine, *Education Gazette*.⁴ The magazine covers a variety of news articles, notices and vacancies and provides a monthly update to the early childhood education sector.

The National Agency for Education in **Sweden** publishes support material and General Guidelines with comments for guidance and supervision for municipality management, heads of preschools and staff in preschools.

The Swedish Curriculum includes guidelines for preschool staff which specify the responsibilities of teachers to ensure that work is carried out in accordance with the general goals in the curriculum and to specify the responsibilities of each person in the work team. This contributes to a better understanding of the expected tasks of different staff members towards child development.

To develop the workforce and leadership skills

Making it a requirement for staff to have access to professional development opportunities

There is a requirement that all staff in **New Zealand** centres have access to ongoing professional development. Implementation is the responsibility of each centre. The

government provides funding to centres for professional development, including improving qualifications, which covers much of the costs; and most of the courses are provided by colleges of education. The costs of replacement staff (to cover for workers taking courses) are usually split between the government and the centre. All chartered centres are supposed to be moving to a system of staff appraisal, which should identify staff development needs.

Promoting action on leadership development

The **New Zealand** Teachers Council published an occasional paper⁵ focused on leadership in early childhood education in New Zealand. The absence of a cohesive leadership strategy was seen as a significant risk to professional initiatives supporting quality teaching in ECEC. The paper explores the current state of leadership and leadership development and the issues and dilemmas facing the sector, including the identification of possible future directions. The Ministry of Education has also identified providing “leadership development programmes to strengthen leadership in ECEC” as a priority.

Focusing training on areas in which there is a large need for development

Based on what staff need, **Sweden** focuses training on language development, mathematics, experimental sciences and child assessment of learning and well-being. For this, the National Agency for Education in Sweden has, in co-operation with Swedish Television, made short films to give inspiration on how to implement and stimulate different curriculum subjects, such as mathematics and natural science, in preschool.

New Zealand's experience has been that allowing ECEC services to self-select for participation in professional development activities can mean that some services over participate in professional development while other services do not participate at all. Learning from this lesson, the government pursued a new approach to funding professional development, which requires providers to go into targeted communities and determine training programmes that best meet the needs of those communities.

New Zealand focuses on the implementation of *Te Whāriki*, the Early Childhood Curriculum, and provides training to improve learning outcomes for all young children, especially those at risk. Teachers are expected to strengthen their teaching practices. The government also provides training to support the implementations of *Kei Tua o Te Pae*, Assessment for Learning. Teachers are expected to develop effective assessment practices that meet the aspirations of the curriculum.

Implementing a professional development project focusing on leadership

The Education Leadership project in **New Zealand** is a professional development project that aims to nurture curriculum and pedagogical leadership in centres through a research project that has an in-centre lead teacher-facilitator who is mentored by an outside experienced facilitator. While the lead teacher is involved in workshops that explore the theory and practice of leadership, the focus is on the centre's teaching practice and establishing innovative education. The leadership skills that are developed in this programme have led many of the teachers to take up a further leadership position as the outside facilitator to other centres. Careful building of relationships and a credit view of teachers' teaching and leadership capabilities are central to the programme. Other features include workshops, visits, retreats, presentations, research, ICT innovation, transition projects, inspiration days, and national and international conferences.

Implementing a government-funded programme focusing on improving staff competences

To strengthen staff competences, **Sweden** has allocated SEK 600 million on continuing education for preschool teachers and childminders for a three-year period (2009-11) under

the programme “The boost for preschool”. The training is primarily directed at advancing pedagogical competence for preschool staff. The programme gives thousands of preschool teachers and childminders the chance to take further education courses – at the university level (for preschool teachers) and at the upper secondary/high school level (for childminders). Teachers and childminders keep 80% of their salary during the study period, co-funded by the government and the preschool principal organisers. The courses focus on children’s linguistic and mathematical development and evaluation of preschool activities. There is also an opportunity for preschool teachers to take research studies to have a licentiate degree. The purpose is to increase the number of post-graduated preschool teachers in preschool.

Funding institutions that provide continuous training for teachers working with minority or disadvantaged children

In **New Zealand**, the Ministry of Education developed a new programme for centrally funded professional development. The change was in response to a reduction in available funding, which provided an impetus for targeting professional development to ECEC services catering to children from the government’s priority groups: Māori, Pasifika and low-socio-economic communities. Centrally-funded professional development contracts are for a three-year period. Providers are required to go into targeted communities, carry out a needs analysis and plan a programme that best meets the needs of particular communities. This new approach to central funding for providers intends to decrease the competitive environment for providers and give way to a more collaborative approach to providing professional development.

Developing practical support kits for leadership positions

In 2002, the **New Zealand** Educational Institute (NZEI) published the Professional Leadership and Management Kit (in book format) in an attempt to provide practical support and guidelines for those in leadership positions in ECEC. A Principal’s Kit⁶ has been developed by the NZEI as well. These kits aim to give people in leadership positions the tools they need to deal with challenges in leadership and being a principal.

Developing a self-evaluation tool for staff

In **Sweden**, self-evaluation kits have been developed so that ECEC professionals can evaluate their knowledge of the curriculum framework, child development, and their pedagogical practices. This tool can be used for staff to self-reflect on their own competences and skills and help them in their own development. Pedagogical advisors work comprehensively at the local level to improve the quality of pedagogy in all services by providing up-to-date information on new forms of pedagogy and supporting the organisation on internal quality improvement processes, such as team-evaluation and documentation.

The *Te Whāriki* curriculum in **New Zealand** provides staff with questions for reflection. According to New Zealand, questioning and reflection are the first steps towards self-analysis and personal development and improvement. New Zealand encourages adults working with children to debate the practices they are using and the work they are doing, which forms the base for continued evaluation of their competences and skills. It can identify staff’s development needs and can provide input for improving their practices.

To manage the quality of the workforce in different ECEC provisions

Monitoring the quality of the ECEC workforce through renewal of certificates/licensing

In **New Zealand**, registered teachers need to renew their registration for a teacher practicing certificate (licence). They must provide evidence of meeting the requirements for full registration during the appraisal process every three years. This includes a vetting process

conducted by the Licensing & Vetting Service Centre⁷ “to minimise the likelihood of the more vulnerable members of society (children, older people and those with special needs) being put at risk by individuals who may have displayed behaviour that could be detrimental to others’ safety and wellbeing”.

Assessing staffing needs in ECEC centres

In **New Zealand**, the progress of staffing and workforce in Māori language immersion ECEC services and Pacific Island Education and Care Centres is being monitored and assessed. These are the services which most often have large staff shortages. Based on these assessments, further steps will be taken if necessary to increase teacher supply in these services.

Systematically evaluating quality

In **Sweden**, the quality of the preschool is regularly and systematically documented, followed up, evaluated and developed. The aim of the evaluation is to obtain knowledge of how the quality of the preschool *i.e.*, its organisation, content and actions, can be developed so that each child receives the best possible conditions for learning and development. Ultimately, this involves developing better work processes, being able to determine whether the work takes place in accordance with the goals, as well as investigating what measures need to be taken in order to improve the conditions for children to learn, develop, feel secure and have fun in the preschool, such as developing or training staff or supplying more staff. To assure that the quality and performance of staff are being evaluated, management and head of preschools are in charge of this and should implement on a regular basis.

NOTES

- 1 www.massey.ac.nz/massey/learning/colleges/college-education/pg-dip-in-specialist-teaching.cfm
- 2 www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf
- 3 www.educate.ece.govt.nz/
- 4 www.edgazette.govt.nz/
- 5 www.teacherscouncil.govt.nz/research/ece/concept-leadership-ece.pdf
- 6 www.principalskit.org.nz/
- 7 www.police.govt.nz/vetting-guidelines

ANNEX A. DEFINITIONS AND METHODOLOGIES

Professional development refers to knowledge, skills and competencies attained for professional advancement. **Professional development opportunities** are aimed at improving the performance of ECEC staff in already assigned positions. Professional development opportunities are often referred to as “in-service training” and “continuous education/training”. The contents indicate which subject areas and topics these training programmes seek to address and improve upon. Countries could choose from the following:

- *Language learning and other subjects*: includes language learning, languages, arts, math, sciences, information and communication technologies, etc.
- *New curriculum*: includes new and updated curriculum, reform in curriculum, etc.
- *Methods/practice*: includes teaching methodologies, teaching strategies and practices, such as Reggio Emilia or inclusive education.
- *Values/ethics*: includes ethics, anti-discrimination, equal opportunity, citizenship, etc.
- *Planning and management*: includes planning of activities and the curriculum, programming, management, leadership, etc.
- *Communication*: includes communication with parents, communication with other staff for team teaching/caring, use of information and communication technologies, etc.
- *Monitoring, assessment and evaluation*: includes monitoring, assessment (*i.e.*, of targets/goals/etc.) of child outcomes, evaluation of development, programme quality and staff performance, etc.
- *Health, safety and social welfare*: includes health, safety, well-being, social welfare, etc.
- *Special needs and educational transitions*: these two subjects were not included in the list to choose from as separate topics, but countries could indicate in a box named “other” whether they were addressing these subjects in professional development.

Recognition of prior learning refers to a process used by governments, accreditation organisations, employers or universities or colleges to evaluate learning acquired outside the classroom and often formally recognised as academic credits, certificates, salary increase, etc.

Working conditions in ECEC refer to the characteristics of work and the workplace that can influence the ability and motivation of professionals to do their work well. They also relate to ECEC staff satisfaction with the workplace, work tasks and the nature of the job. Indicators to describe working conditions often include salaries and staff turnover rate but also non-

financial benefits, such as the possibility to participate in training (see International Comparison on “Professional development”) and staff-child ratio (see International Comparison on “Minimum standards”).

Staff turnover rate is based on the number of workers that had to be replaced over a given period of time, calculated as the number of employee departures divided by staff members and multiplied by a hundred (Capko, 2001).

Comparisons are made among staff working in different settings:

- **Centre-based day care:** encompasses all child care that is provided outside the home in licensed centres. The services provided can be full- or part-time and are most commonly referred to as nurseries, day care centres, *crèches*, playschools and parent-run groups.
- **Preschool early education programmes (Kindergartens):** includes centre- or school-based programmes designed to meet the needs of children preparing to enter primary education. In most countries, these programmes include at least 50% educational content and are supervised by qualified staff. Among respondents, it is common to enrol an older age bracket from circa age three in kindergartens or preschools.

REFERENCES

Capko, J. (2001), “Identifying the Causes of Staff Turnover”, *Family Practice Management*, Vol. 8, No. 4.

ANNEX B. FIGURES FOR SPIDER WEB ON POLICY OUTCOMES¹

Fifteen indicators have been selected to compare Finland's child outcomes with other OECD countries based on the available data for international comparison.

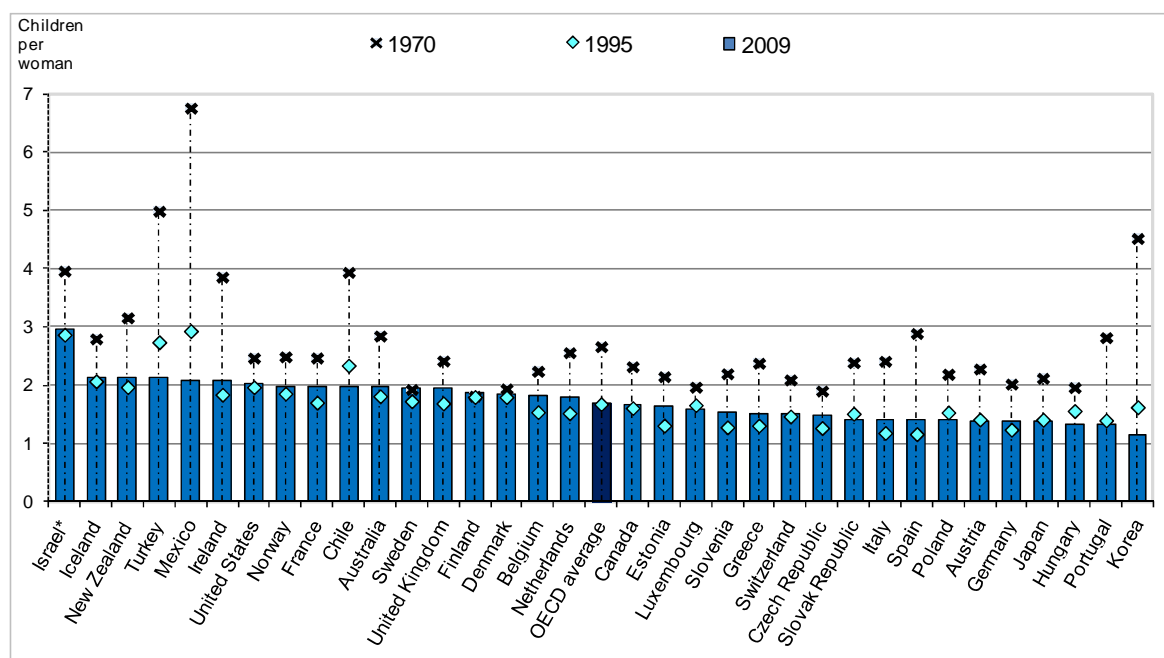
1. Fertility
2. Enrolment in formal care services for children under age 3
3. Enrolment in early childhood education and care at age 3
4. Enrolment in early childhood education and care at age 5
5. PISA reading performance at age 15
6. PISA mathematics performance at age 15
7. PISA Science performance at age 15
8. Healthy weight rates among 15-year-olds
9. Children under 18 who live above poverty line
10. School continuing survival
11. People aged 15-19 who were in education or work
12. Maternal employment rates, age of youngest child under 3 years
13. Maternal employment rates, age of youngest child 3-5 years
14. Gender equality in median earnings of full-time employees

Finland has selected New Zealand and Sweden as its reference countries where data are available.

1. Fertility

- Fertility rates decreased significantly between 1970 and 2009 in all OECD countries. Finland's fertility rate has remained stable since 1995 with 1.86 births per woman in 2009, which is above the OECD average.
- A fertility rate of 1.86 births is below the replacement rate of 2.1 births and leads to each new generation being less populous than the previous one. This can be, but is not necessarily, related to possibilities for women to combine work and family life, including maternity leave entitlements, ECEC participation options and affordability of care. However, a fertility rate below the replacement rate does not necessarily mean the population is shrinking: population growth also depends on immigration numbers.

Figure B.1. Trends in total fertility rates



Note: 2007 for Belgium and Canada; 2008 for Australia, Germany, Greece, and Iceland.

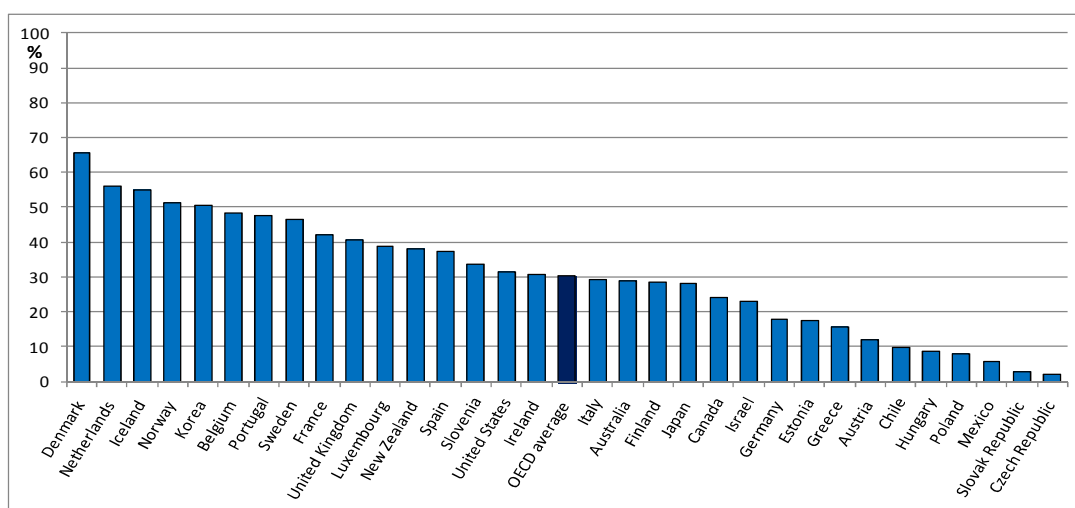
Source: National Statistical Offices, 2010, and Eurostat Demographic Statistics, 2010 from OECD Family database, January 2011.

2. Enrolment rates in formal child care of children under the age of three

- On average, around 30% of children under the age of three are enrolled in formal child care facilities in OECD countries, although enrolment rates vary considerably across countries.
- Finland has a below average enrolment rate (28.6%). Their enrolment rate is also lower than in its reference countries, Sweden (46.7%) and New Zealand (37.9%).
- In many OECD countries, children under the age of three are often taken care of in informal child care services, such as family or domestic care services. When enrolment rates in informal care services would be taken into account, enrolment rates for children under the age of three are expected to be higher. However, data on enrolment in informal services is currently unavailable.

Figure B.2. Enrolment rates in formal child care for children under age three

As a percentage, in 2008



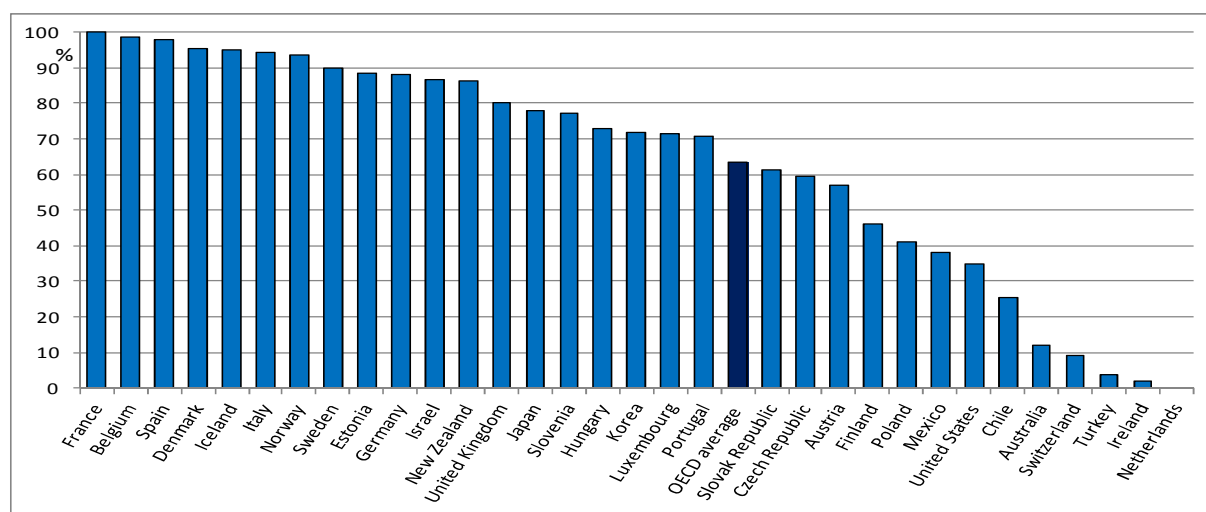
Source: OECD Family Database, November, 2011. Data for Korea come from National Sources for Year 2010.

3. Enrolment rates in formal early education (preschool) at age three

- On average, around 63% of children aged three are enrolled in formal early childhood education services in the OECD countries. Enrolment rates for children at age three vary considerably across countries.
- Enrolment is close to 100% in France and Belgium, where free early education starts around age three. On the contrary, it is less than 5% in the Netherlands, Ireland and Turkey where most children still attend child care services instead of preschool when participating in ECEC.
- The enrolment rate for three-year-olds in Finland is below the OECD average (46.1%) and lower than in its reference countries, Sweden (89.8%) and New Zealand (86.2%).

Figure B.3. Enrolment rates in early childhood education and care at age three

Children attending full-time and part-time service in 2009



Note: OECD average does not include Greece and Canada. Data for Korea come from National Sources for Year 2010.

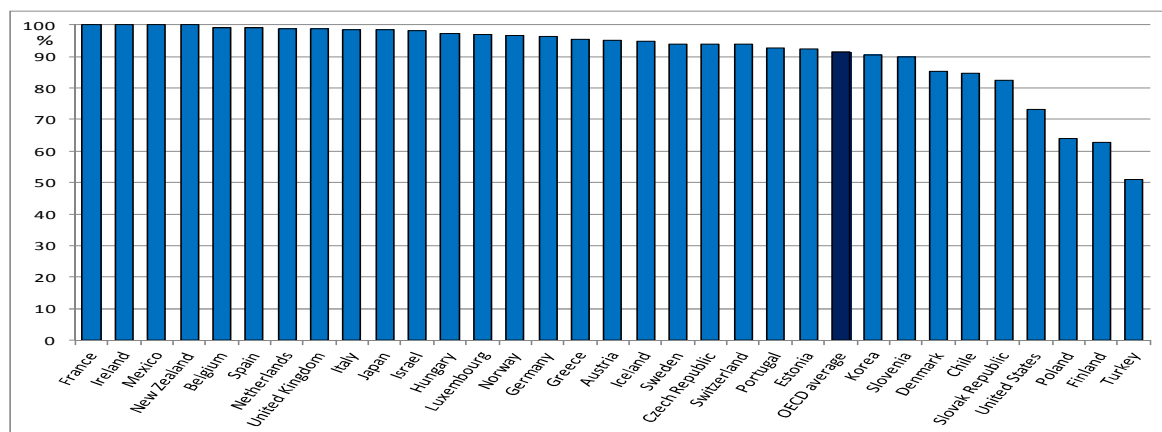
Source: OECD Education Database, November 2011.

4. Enrolment rates in formal early education (preschool) at age five

- In the majority of OECD countries, enrolment rates at age five in early childhood education and care exceed 90%.
- Finland has a relatively low enrolment rate (62.6%) along with Poland and Turkey. Enrolment rates in New Zealand and Sweden are higher than those in Finland with 100% (compulsory school starts at the age of five in New Zealand) and 93.9% respectively.

Figure B.4. Enrolment rates in early childhood education (pre-primary education) at age five

Children attending full-time and part-time service in 2009



Note: At age 5, Canada is not included in the OECD average. Data for Korea comes from National Sources for year 2010.

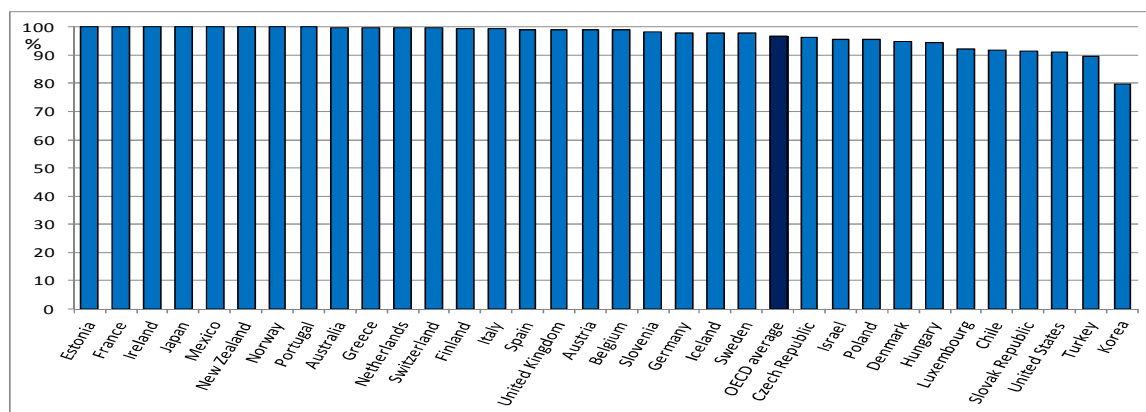
Source: OECD Education Database, November 2011.

Enrolment rates in formal early education at age six

- Enrolment rates at age six are, on average, 94.8%, and 22 countries out of 34 achieve almost full enrolment rates, including Finland and New Zealand. In Finland, six-year-olds attend a free year of preschool before starting compulsory primary schooling. However, in several other countries, including Sweden and New Zealand, six-year-olds are already enrolled in compulsory education and enrolment rates are therefore high.

Figure B.5. Enrolment rate in pre-primary education at age six

Children attending full-time and part-time service in 2009



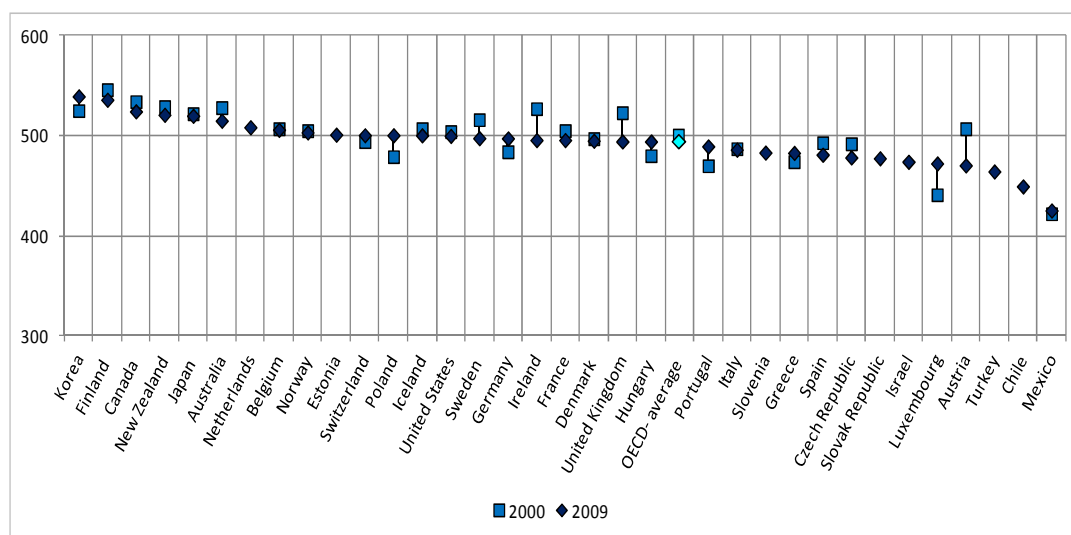
Note: At age 6, Canada is not included in the OECD average.

Source: OECD Education Database, November, 2011.

5. PISA 2009 reading performance

- 15-year-olds in Finland score well on the PISA reading assessment in comparison to other OECD countries. Only Korean students outperform Finnish students. Between 2000 and 2009, Finland's average score for the PISA reading test decreased with 11 score points.
- A closer look at the student distribution by proficiency level can provide further insights into at what level Finnish students perform in reading. 15-year-old students in Finland are concentrated in proficiency levels 3 and 4.
- Finland, Korea and New Zealand have an above average percentage of students at proficiency level 4 or above. In comparison with Sweden and New Zealand, Finland has fewer students in level 2 or below.

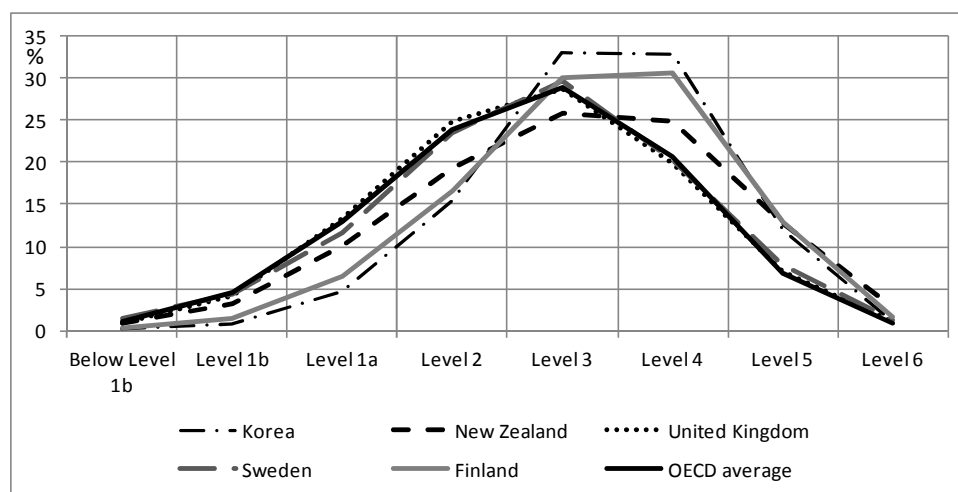
Figure B.6. PISA Reading performance in 2000 and 2009



Source: OECD PISA Databases 2000 and 2009.

Figure B.7. Reading performance dispersion

Percentage of students at the different levels of proficiency in 2009



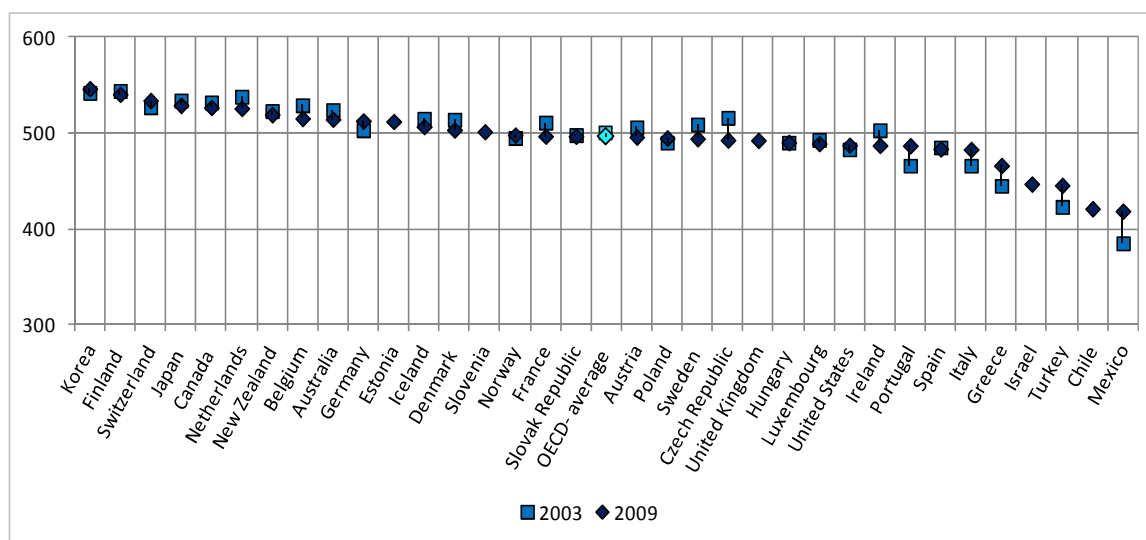
Note: The OECD Programme for International Student Assessment (PISA) assesses students' reading performance, and knowledge about mathematics and science, when children are in secondary education at the age of 15. For PISA scores corresponding to each level of proficiency, see PISA Database.

Source: OECD, PISA 2009 Database, Table I.2.1.

6. PISA 2009 mathematics performance

- 15-year-olds in Finland are among the top-performers regarding the PISA mathematics assessment; although between 2003 and 2009, Finland's average performance score decreased by 4 score points. In Ireland, Sweden, France, Belgium, the Netherlands and Denmark, students' scores decreased with 11 to 16 score points.
- On the proficiency distribution scale, Finland has a similar distribution pattern to that of Korea with a larger than average proportion of students performing at level 4 or above. Furthermore, the share of students performing at level 2 or below is far below the OECD average and lower than in New Zealand and Sweden.

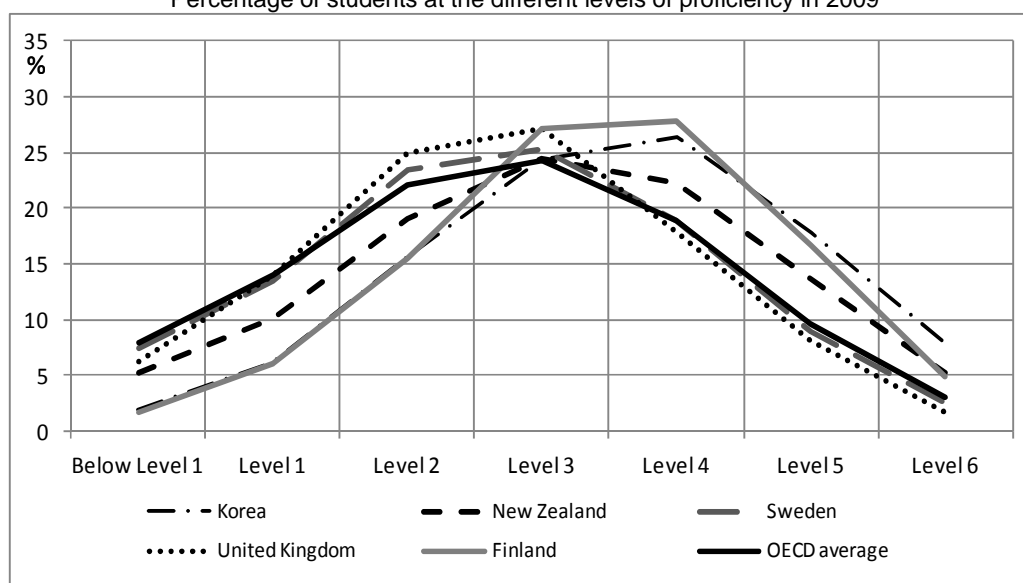
Figure B.8. PISA Mathematics performance in 2003 and 2009



Source: OECD PISA Databases 2003 and 2009.

Figure B.9. Mathematics performance dispersion

Percentage of students at the different levels of proficiency in 2009



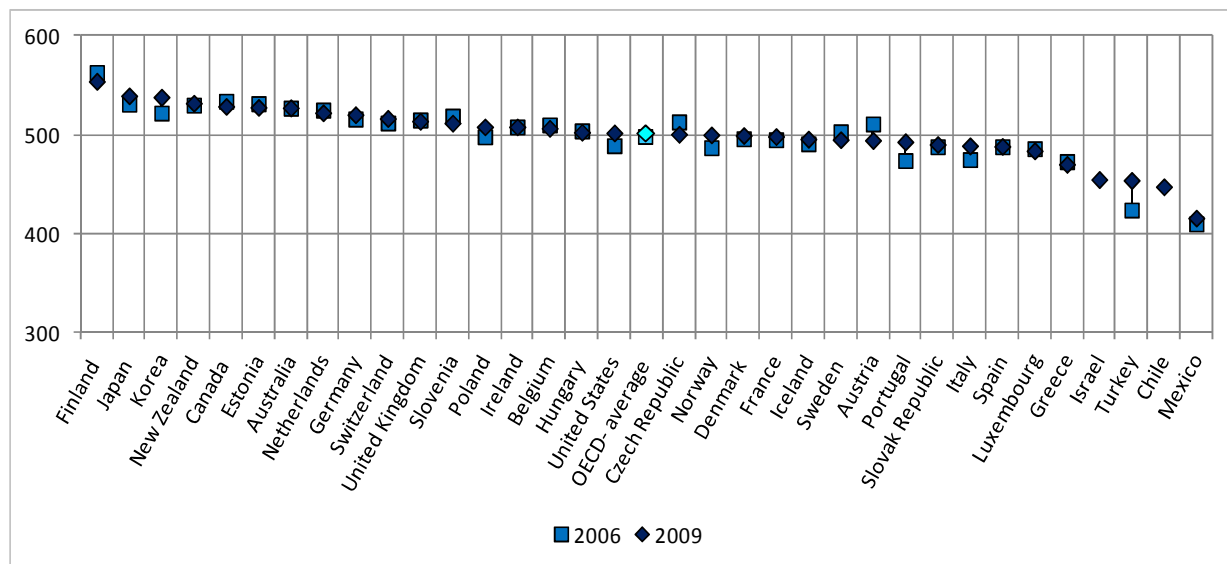
Note: For PISA scores corresponding to each level of proficiency, see PISA Database.

Source: OECD, PISA 2009 Database, Table I.3.1.

7. PISA 2009 science performance

- 15-year-olds in Finland rank at the top for the PISA science and the proficiency distribution scale although Finland's performance decreased with 9 score points between 2006 and 2009.
- On the performance distribution scale, Finland, Korea, New Zealand and the United Kingdom have a larger-than-average proportion of students at proficiency level 4 or above. Furthermore, the share of Finnish students performing at level 2 or below is below the OECD average and lower than in New Zealand, Sweden and the United Kingdom assessment in 2009.

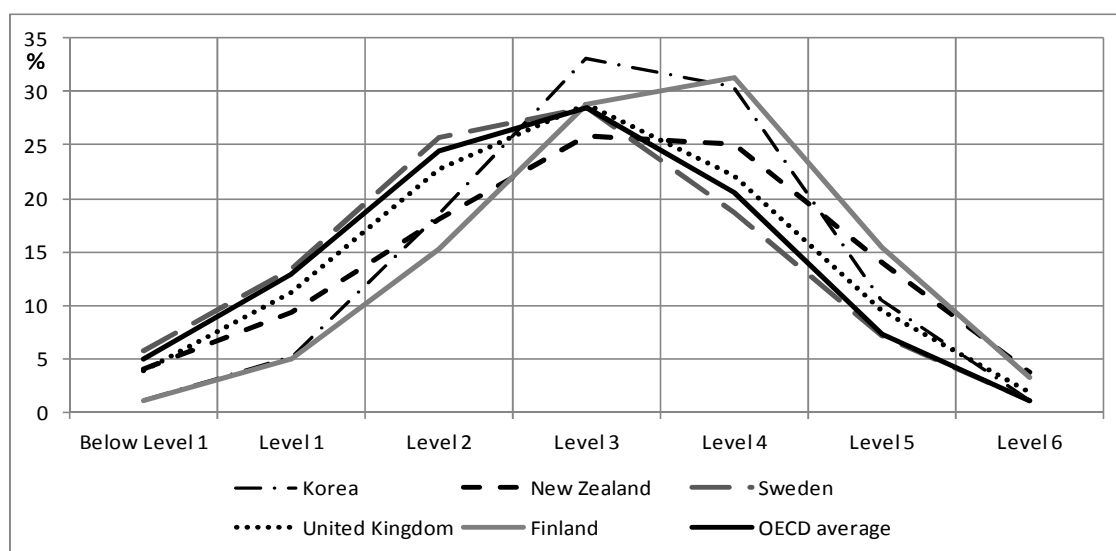
Figure B.10. PISA Science performance in 2006 and 2009



Source: OECD PISA Databases 2006 and 2009.

Figure B.11. Science performance dispersion

Percentage of students at the different levels of proficiency in 2009



Note: For PISA scores corresponding to each level of proficiency, see PISA Database.

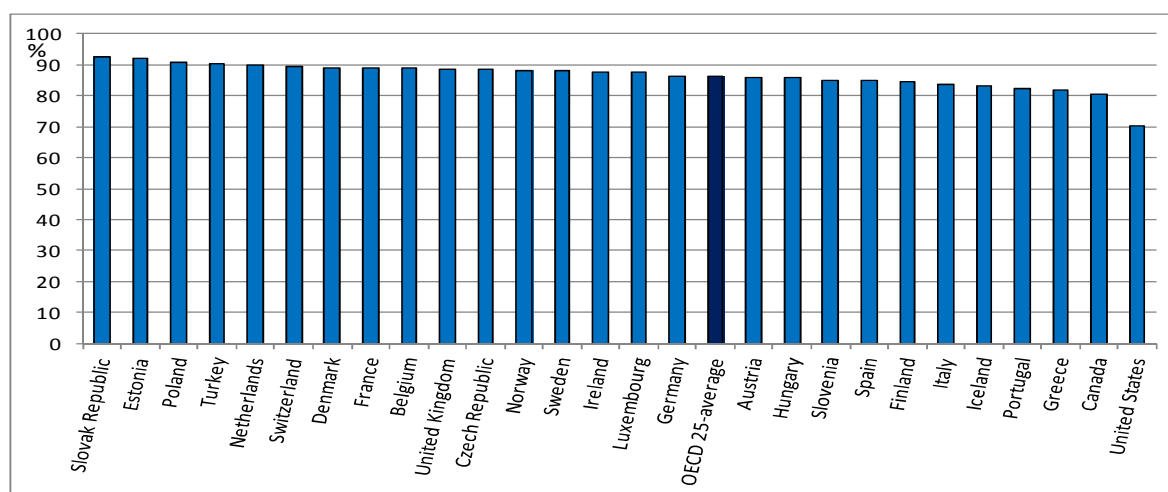
Source: OECD, PISA 2009 Database, Table I.3.4.

8. Healthy weight rates among 15-year-olds

- On average, around 86% of all 15-year-olds maintain healthy weight in the OECD countries.
- Finland has, with 63.6%, a lower proportion of students in healthy weight than the OECD average. Sweden has, with 88%, a higher share of 15-year-old students having a healthy weight than Finland.
- High obesity rates can indicate that children have an unhealthy lifestyle or practice little exercise.

Figure B.12. Healthy weight rates among 15-years-olds

BMI less than 25, based on self-assessment by respondents, 2006



Note: The Body Mass Index (BMI) is the most commonly used indicator for assessing excess weight among adolescents (aged 15+) and adults. This index is calculated as the weight in kilograms divided by height in meters squared (kg/m²). The World Health Organisation (WHO) defines individuals with a BMI equal to or greater than 25 as “overweight”. For Ireland, 30% or more missing data.

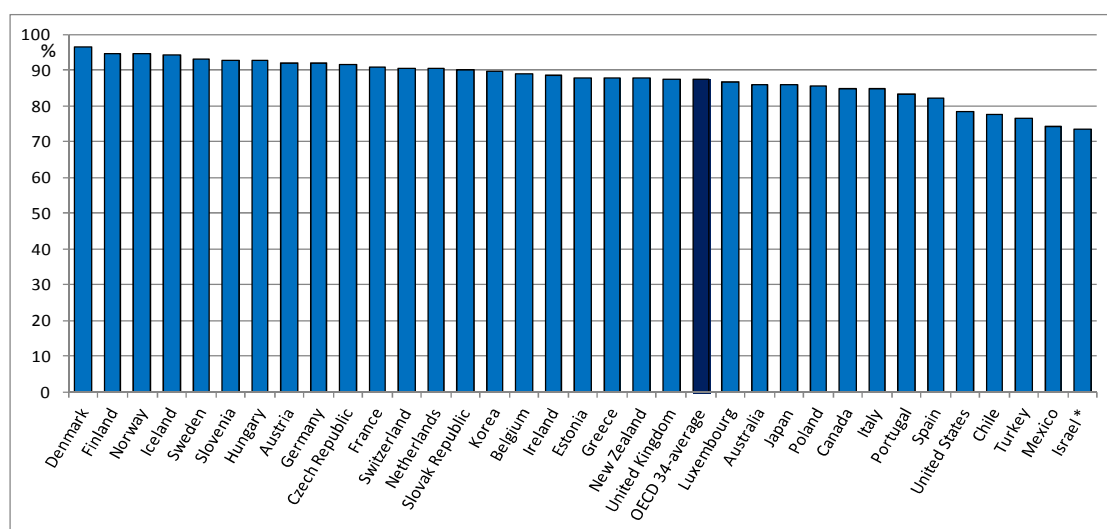
Source: OECD Health Behaviour in School-aged Children 2005/2006 from OECD Family Database, January 2011.

9. Children under age 18 living above the poverty line

- On average, one in eight children lives in a family who earns less than half of the median income in the OECD countries.
- Finland, along with other Nordic countries, has the largest proportion of children living above the poverty line with 94.6%.
- Sweden and New Zealand have a lower share of children living above the poverty line than Finland, although both countries also have an above average proportion.

Figure B.13. Children under 18 above poverty line

In 2008 or latest available year



Note: Children <18 above poverty line reports the inverse of poverty for children <18.*Poverty thresholds are set at 50% of the median equivalised disposable income of the entire population.

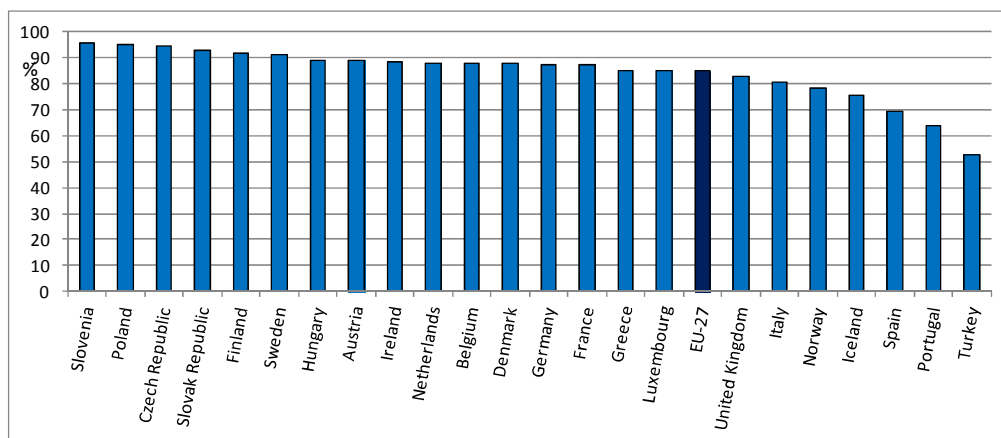
Source: OECD Income distribution questionnaire, version October 2011, for OECD countries; EU-SILC 2009 for non-OECD countries

10. School continuing survival

- In the 27 European Union countries, on average, 84.8% of people aged 18 to 24 participate in secondary education or training.
- Finland and Sweden have a higher proportion of school survival (around 92%): most young people in these countries decide to continue education and/or training after finishing lower secondary education.

Figure B.14. School continuing survival

As a percentage of the population aged 18-24 in secondary education, further education or further training, in 2007



Note: The school continuing survival indicator is the inverse of the early school leavers' indicator. Students living abroad for one year or more and conscripts on compulsory military service are not covered by the EU Labour Force Survey, which may imply higher rates than those available at national level. The indicator covers non-nationals who have stayed or intend to stay in the country for one year or more. Data for the Czech Republic are from 2006 and data for France do not cover the overseas departments (DOM).

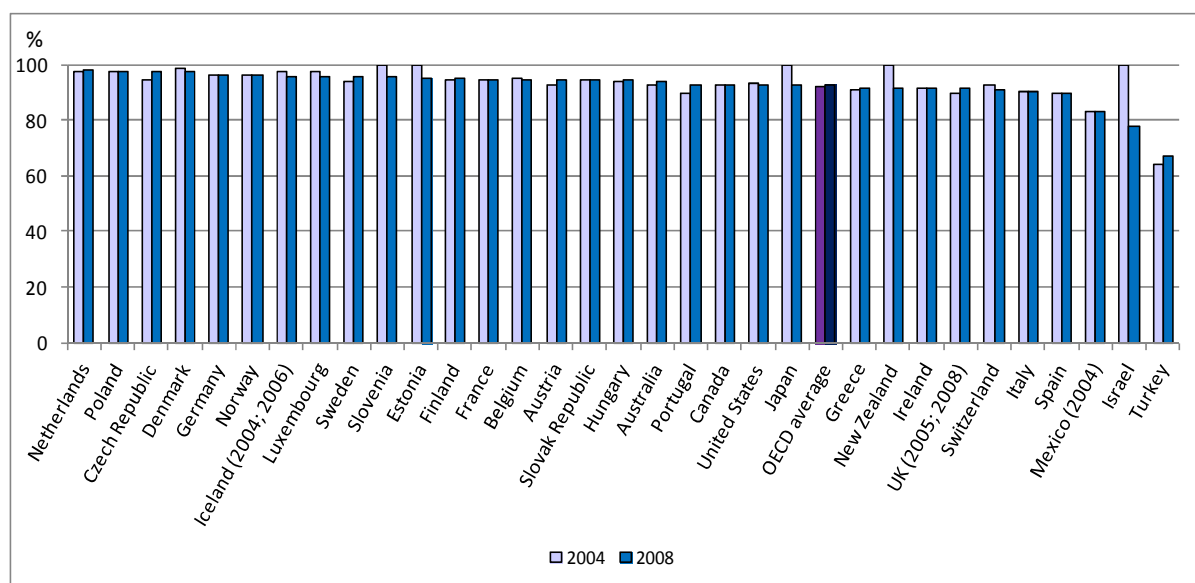
Source: Eurostat database (data extracted September 2009) from Eurydice & European Commission, Gender differences in Educational Outcomes: study on the measures taken and the current situation in Europe, EC, December 2009.

11. People aged 15 to 19 who are in education or work

- On average, 92.4% of all 15-to-19-year-olds in the OECD countries are either in education or in employment.
- Finland has an above-average share of 15-to-19-year-olds working or studying. The number remained stable between 2004 and 2008.
- The rest of the Finnish population aged 15 to 19 (5.1%) faces the challenge of not attending some form of education or having a job employment. In New Zealand, a larger proportion of young people (8.4%) face this challenge.

Figure B.15. People aged 15-19 who were in education or work

As a percentage of people aged 15-19 in the total population, 2004 and 2008



Note: In 2008, youth aged 15-24 for Japan. OECD average includes 27 OECD countries.

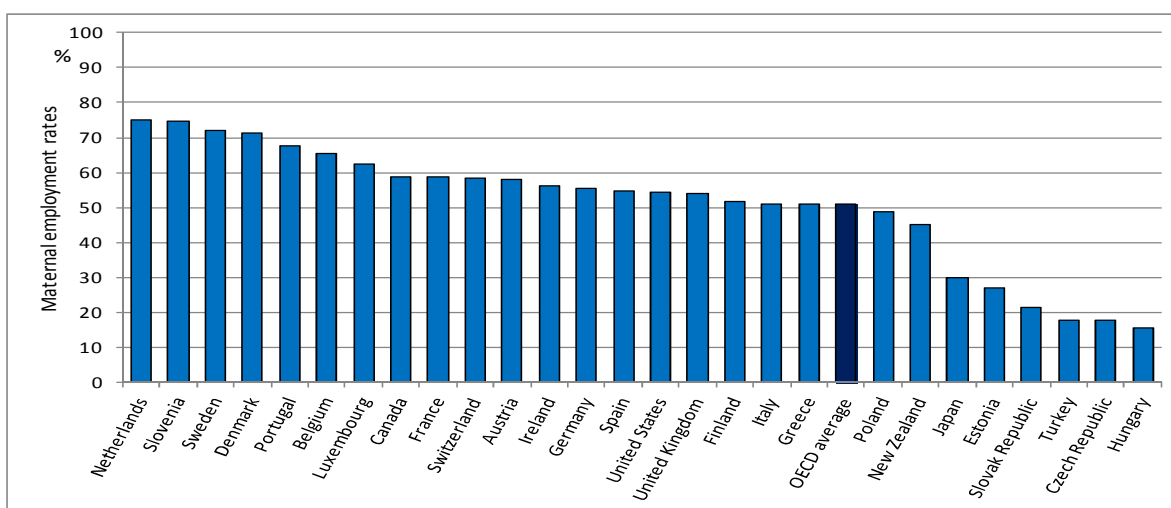
Source: OECD Education database, 2010.11.

12. Maternal employment rates, age of youngest child under three years

- On average, almost half of all mothers in OECD countries with their youngest child under three years old are in employment.
- Employment rates among mothers in Finland with their youngest child under three are slightly above the OECD average with 51.8%. Employment rates of mothers of under-3-year-olds are much higher in Sweden with 71.9%.
- Together with the Netherlands and Slovenia, Sweden has the highest maternal employment rates among OECD countries. New Zealand has a lower than average proportion of employed mothers with their youngest child under three (45.1%).

Figure B.16. Maternal employment rates, age of youngest child under three years

In 2008 or latest available year



Note: 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark.

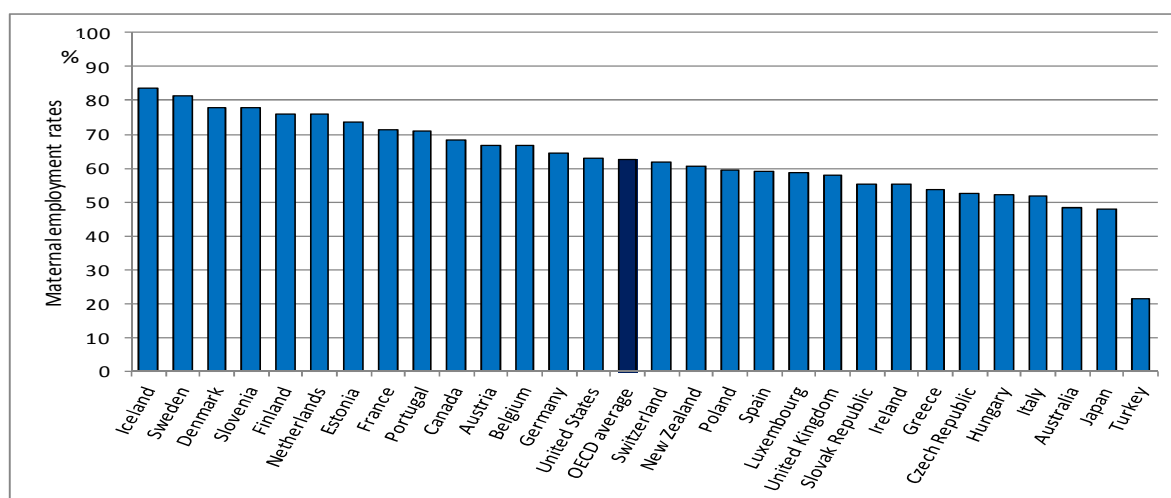
Source: OECD Family Database, May 2011.

13. Maternal employment rates, age of youngest child three to five years

- On average, around 60% of all mothers with their youngest child three to five years are employed in OECD countries.
- Finland's employment rate for mothers whose youngest child is aged between three and five years is among the highest in the OECD at 76%. Also other Nordic countries like Sweden (81.3%) and Denmark (77.8%) have high maternal employment rates. Maternal employment rates in New Zealand are around the OECD average (60.6%).

Figure B.17. Maternal employment rates, age of youngest child three to five years

In 2008 or latest available year



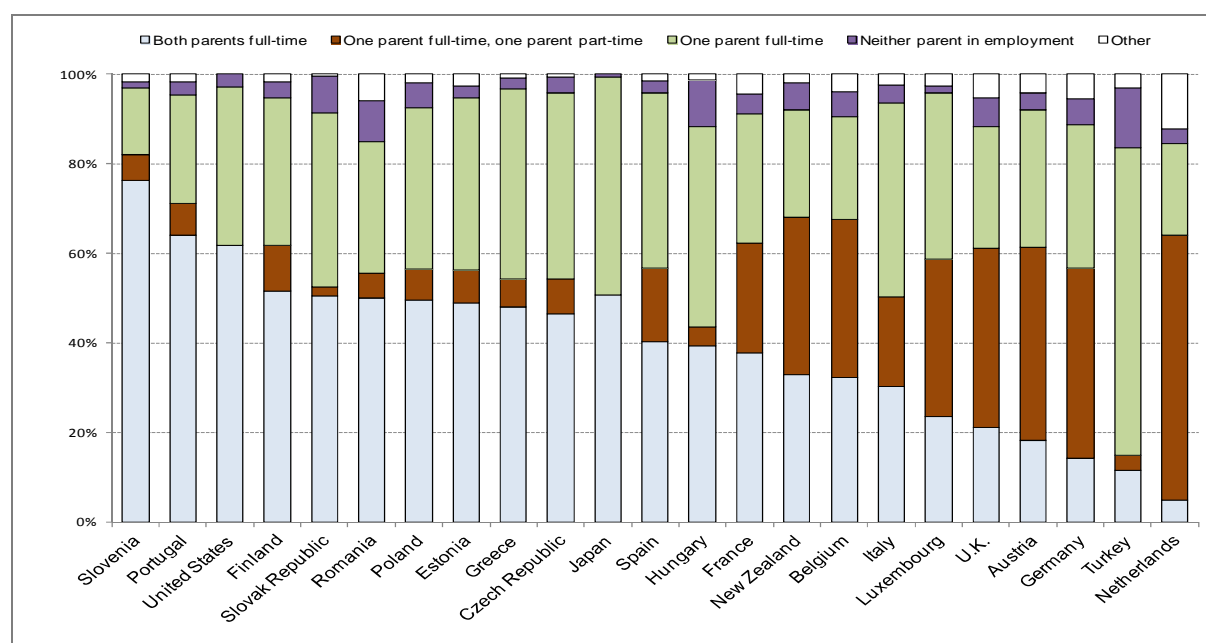
Note: For 3-5 years, data for Australia and Iceland refer to mothers with a youngest child aged less than 5. Year 2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark

Source: OECD Family Database, May 2011.

Parental employment status

- Over 40% of couple families with children are considered to be full-time, dual-earning families. “One-and-a-half earner couples” (one parent working full-time and the other parent working part-time) are most common in Austria, Germany, the United Kingdom and, particularly, the Netherlands.
- In Finland, both partners are in full-time employment in 51.7% of couple families. This indicates that almost half of all parents/partners in families do not work full-time: 32.8% of the families are one-earner families where one parent works full-time: 22.2% of the couple households with children are one-and-a-half earner families.
- New Zealand has a lower proportion of full-time dual-earner families (33%) as well as a relatively high proportion of one-and-a-half earner families (35%).

Figure B.18. Children in couple household by parental employment status



Note: For the United States and Japan, unable to distinguish between full-time and part-time work; year 2008. For New Zealand, children from 0 to 18 years old; the category ‘one parent full-time, one part-time’ refers to the situation where either the father works full-time and the mother works part-time (28% of all couple households), or the father works part-time or is not employed, and the mother is employed (7% of all couple households).

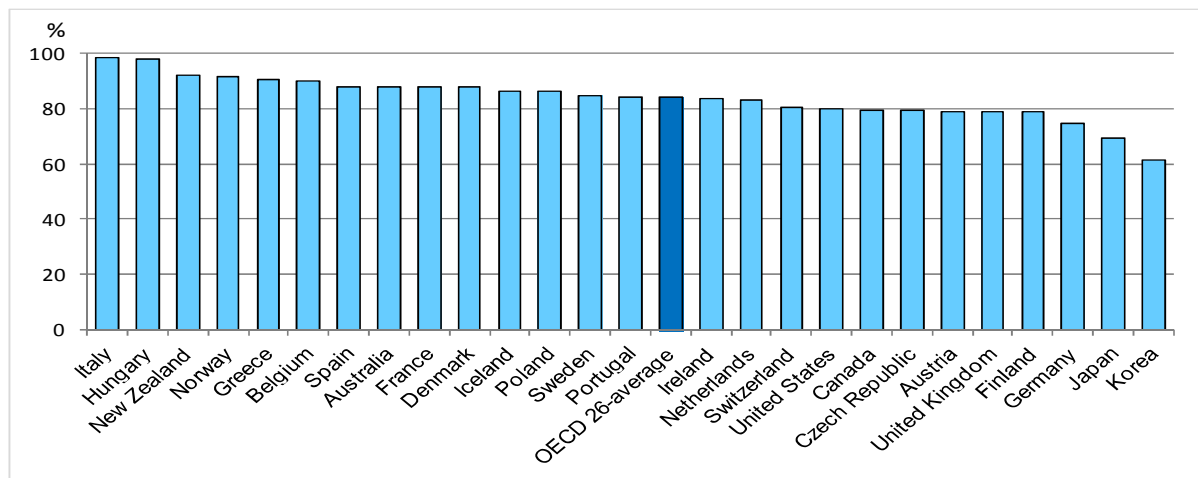
Source: OECD Family database, November, 2011.

14. Gender equality in median earnings of full-time employees

- Among 26 OECD countries, women in full-time employment earn, on average, 82.4% of the median earning.
- Finland has below-average gender equality in median earnings (78.8%). This indicates that there are relatively large differences in earnings between men and women in Finland. New Zealand (92.2%) and Sweden (84.6%) have a far greater gender earning equality than Finland.

Figure B.19. Gender equality in median earnings of full-time employees

In 2008 or latest available year



Source: OECD Family Database, May 2011

NOTES

- 1 The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

ANNEX C. FIGURES FOR SPIDER WEB ON POLICY INPUTS

Nine indicators have been selected to compare Finland's policy inputs with other OECD countries based on the available data for international comparison.

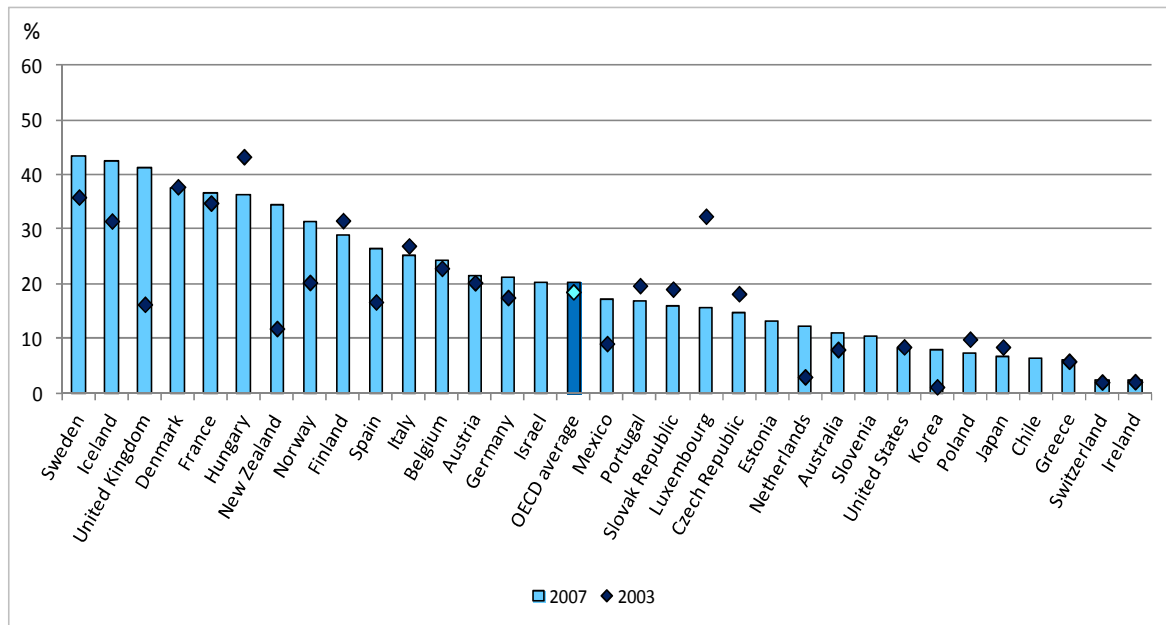
1. Public child care and education expenditure at age 3
2. Public child care and education expenditure at age 5
3. Public spending on family benefits in cash and tax measures
4. Paid maternity leave
5. Paid paternity leave
6. Required ISCED levels for staff working for the care sector
7. Required ISCED levels for teaching staff working for the education sector or in an integrated system for care and education
8. Staff-to-child ratio in child care, zero-to-three-year-olds for integrated system
9. Staff-to-child ratio in preschool or kindergarten, three years to compulsory schooling age for integrated system

1. Public child care and education expenditure at age 3

- Lower public spending on child care and education at the early stage might lead to an increase in informal or private ECEC provision. In countries with low public ECEC expenditures, child care fees can become a barrier to enrolling children in the services, although the government can support families in coverage of ECEC costs through other means, such as tax breaks and child-related benefits.
- Finland has an above-average public expenditure level on ECEC for three-year-olds. Between 2003 and 2007, a decrease in public spending on ECEC for three-year-olds took place (Figure C.1).
- Net child care costs vary across OECD countries. Policy measures to support families financially in covering the costs of ECEC and child raising also vary widely. Broadly, four approaches can be indentified:
 1. The costs are set high, and the net costs remain high even after counting child-related benefits and tax credits.
 2. The costs are set high, but the net costs are lower after counting the benefits.
 3. The costs are set low or at the margin of the affordable level, and no effects by the benefits are observed.
 4. The costs are set low or at the margin of the affordable level, and, further, the net costs are made lower.
- Finland takes the third approach for all types of family, except for single parent families earning 50% of the average wage, which can be categorised into the fourth approach.
- The net child care costs for couple families in Finland with different levels of income are below the OECD average. For dual earning families on average earning, the average child care costs in the OECD are equal to 27% of the average wage, and the net child care costs are 18.4% of the average wage. In Finland, both child care fees and net child care costs are 12.2% of the average wage, far below the OECD average. This is most likely related to the high public investments in ECEC (Figure C.2).
- In Finland, there is no difference in child care fees and net child care costs in terms of the average wage between dual earning families and single-parent families. In single-parent families, child care fees are below the OECD average with 23.9%, while net child care costs are equal to the OECD average with 12.2%. Moreover, in almost half of the OECD countries the net child care cost for a sole parent earning 50% of average earnings is less than half of those for sole parents on average earnings (Figure C.3).

Figure C.1. Public spending on early education and child care per child at age 3

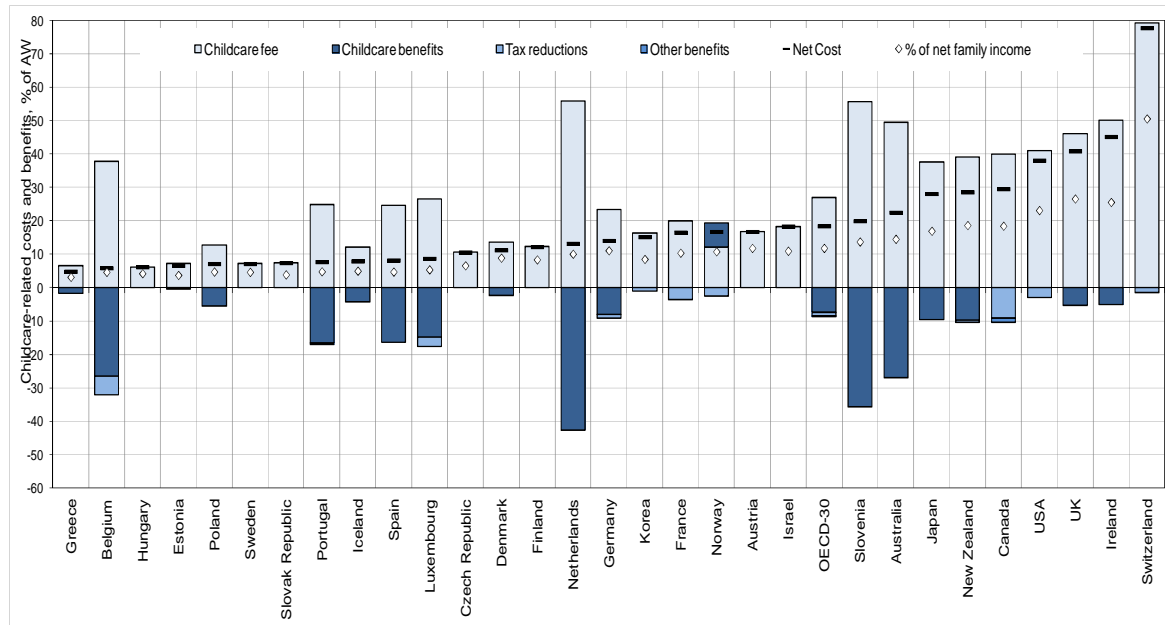
% of median working-age household income (2003 and 2007)



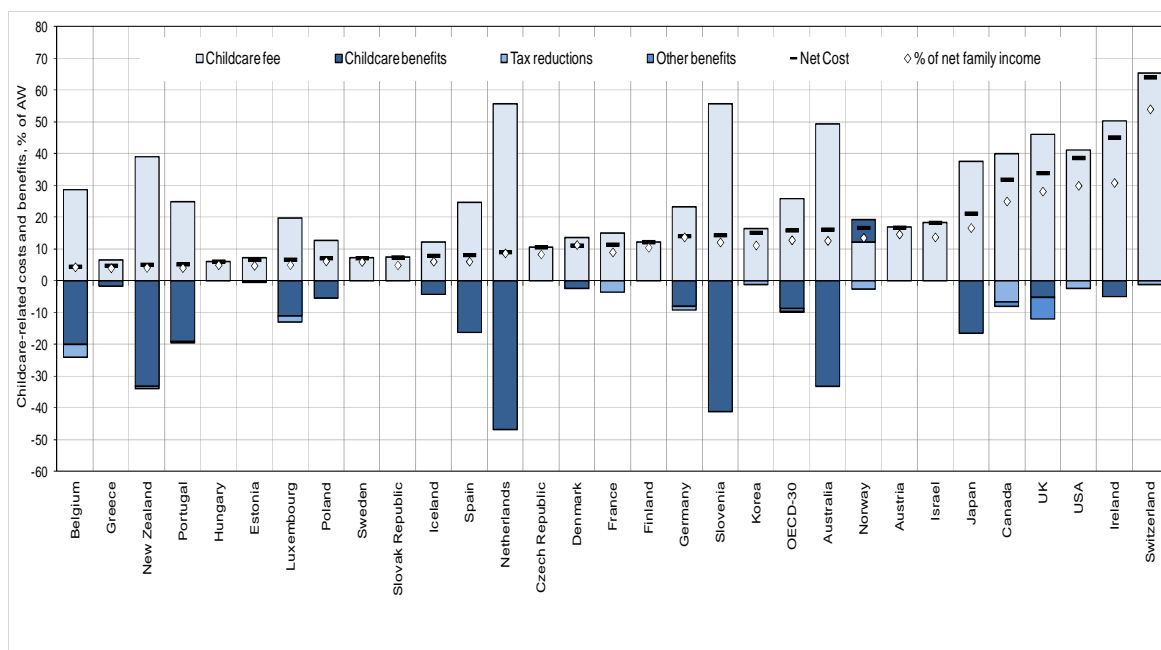
Source: OECD (2009), Doing Better for Children, OECD Publishing and OECD (2011), Doing Better for Families, OECD Publishing.

Figure C.2. Components of net child care costs for couple families, 2008

Panel A. Both earn 100% of average wage



Panel B. Male earns 100% and female earns 50% of average wage

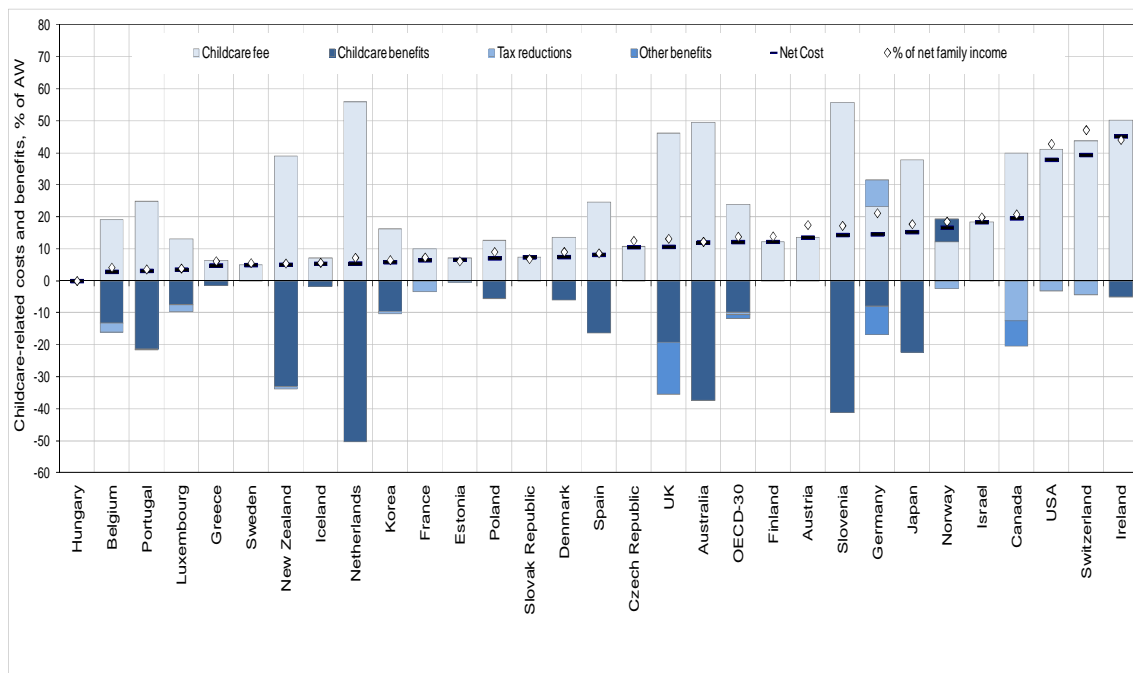


Note: The child care cost calculations for Austria reflect the situation in Vienna; for Belgium, the French community; Canada, the province of Ontario; the Czech Republic in villages and towns with more than 2 000 inhabitants; for Germany, Hamburg; for Iceland, Reykjavik; for Switzerland, Zürich; for the United Kingdom, England; and for the United States, Michigan. These results do not represent the situation in the rest of the country. For example, net child care costs in the Canadian provinces of Alberta or Québec will be different from Ontario. Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

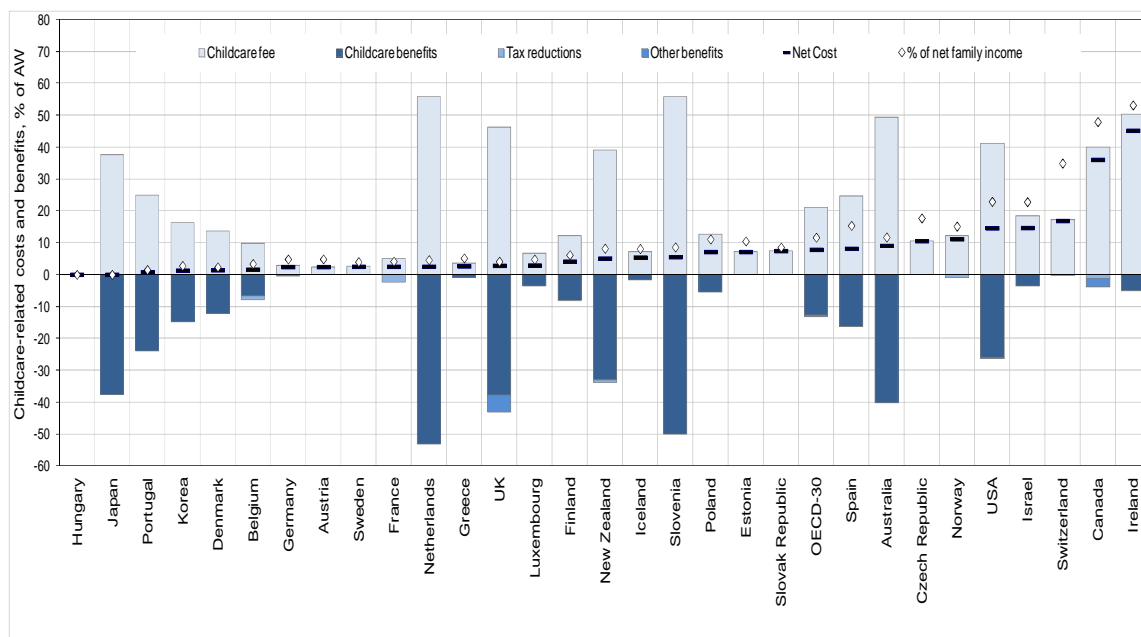
Source: OECD Tax/Benefit models, 2008 from OECD (2011), Doing Better for Families, OECD Publishing.

Figure C.3. Components of net child care costs for sole-parent families, 2008

Panel A. Sole parent earns 100% of the average wage



Panel B. Sole parent earns 50% of the average wage



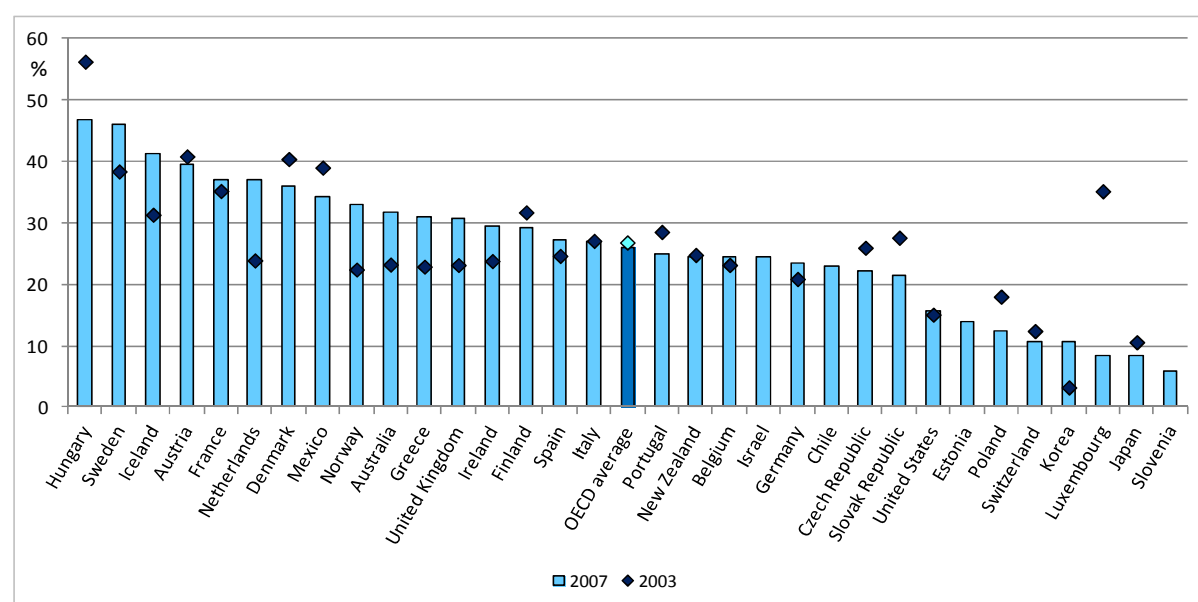
Note: Results are for 2008. Two children aged 2 and 3. "Family net income" is the sum of gross earnings plus cash benefits minus taxes and social contributions. All fee reductions, including free pre-school of child care for certain age groups, are shown as rebates where possible. The child care cost calculations for Austria reflect the situation in Vienna; for Belgium, the French community; Canada, the province of Ontario; the Czech Republic in villages and towns with more than 2 000 inhabitants; for Germany, Hamburg; for Iceland, Reykjavík; for Switzerland, Zürich; for the United Kingdom, England; and for the United States, Michigan. Child care fees used are those determined by government, at either the national or local level, in Belgium, the Czech Republic, Finland, France, Hungary, Iceland, Israel, Japan, Korea, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia. Child care fees for Greece are calculated according to national guidelines. Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>

Source: OECD (2008b) Tax/Benefit models from OECD (2011), Doing Better for Families, OECD Publishing.

2. Public child care and education expenditure at age 5

- Finland has an above-average level of public expenditure on ECEC for five-year-olds, although Finland experienced a decrease in child care and education expenditure at age five between 2003 and 2007.
- In comparison with its reference countries, Sweden has a higher public spending level on ECEC for five-year-olds than Finland, while New Zealand's level falls below that of the OECD average as well as that of Finland.

Figure C.4. Public spending on early education and child care per child at age 5
 % of median working-age household income (2003 and 2007)



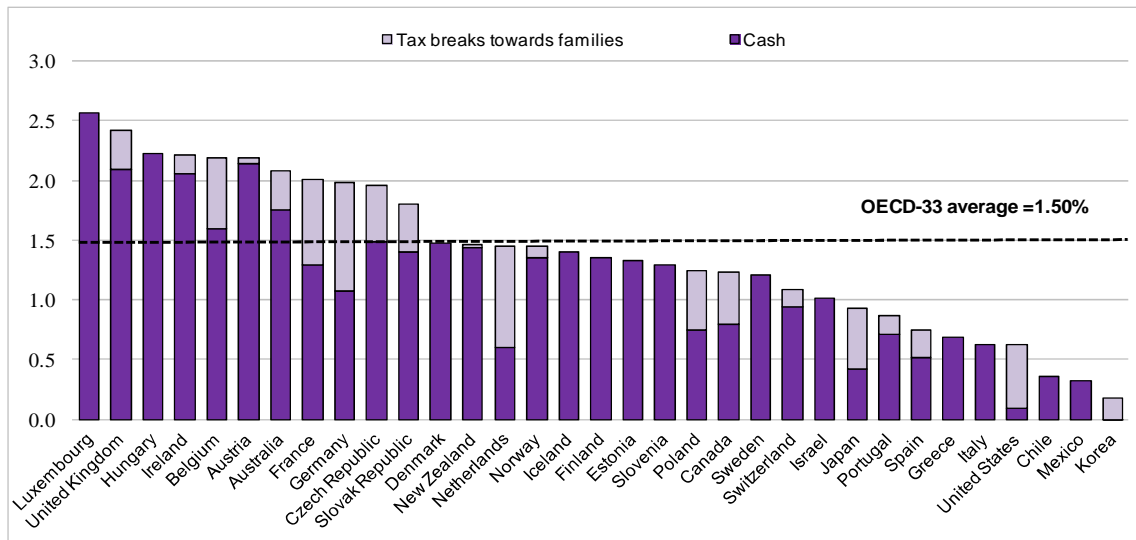
Source: OECD (2009), *Doing Better for Children*, OECD Publishing and OECD (2011), *Doing Better for Families*, OECD Publishing.

3. Public spending on family cash benefits and tax measures

- Besides providing in-kind ECEC services, OECD countries implement measures to financially support families in covering the costs of ECEC and child rearing by distributing cash benefits and tax credits to families.
- Public spending on such measures is, on average, 1.5% of GDP. Finland spends close to the average on cash benefits and tax credits with 1.4% of GDP (Figure C.5).
- When we look at public spending levels on cash benefits and tax credits per child at ages three and five, Finland also has a close-to-average expenditure level with an expenditure level slightly below the OECD average for three-year-olds and is slightly above average for five-year-olds (Figure C.6).
- Public spending on children in the form of cash benefits and tax breaks is below the OECD average and the Finnish expenditure level in both New Zealand and Sweden.
- Public spending on family benefits and education changes with the age of the child (Figure C.7). Finland invests more in family benefits, almost only done in cash transfers, at the earlier stage (birth to age three), while the spending on education increased in middle and late childhood (ages 12 to 22).
- In comparison with the reference countries, New Zealand spends almost a similar share of the median household income on family benefits over the child life cycle. However, public expenditure on ECEC peaks from ages three to five before compulsory school starts. In contrast, Finland has more evenly age-distributed spending on ECEC before compulsory schooling starts at age seven. Sweden's spending pattern on family benefits is similar to that of Finland, but they extend the spending for ECEC until age 13 and invest more money in middle childhood as well as early childhood than Finland.

Figure C.5. Public spending on family benefits in cash and tax measures

As a percentage of GDP in 2007

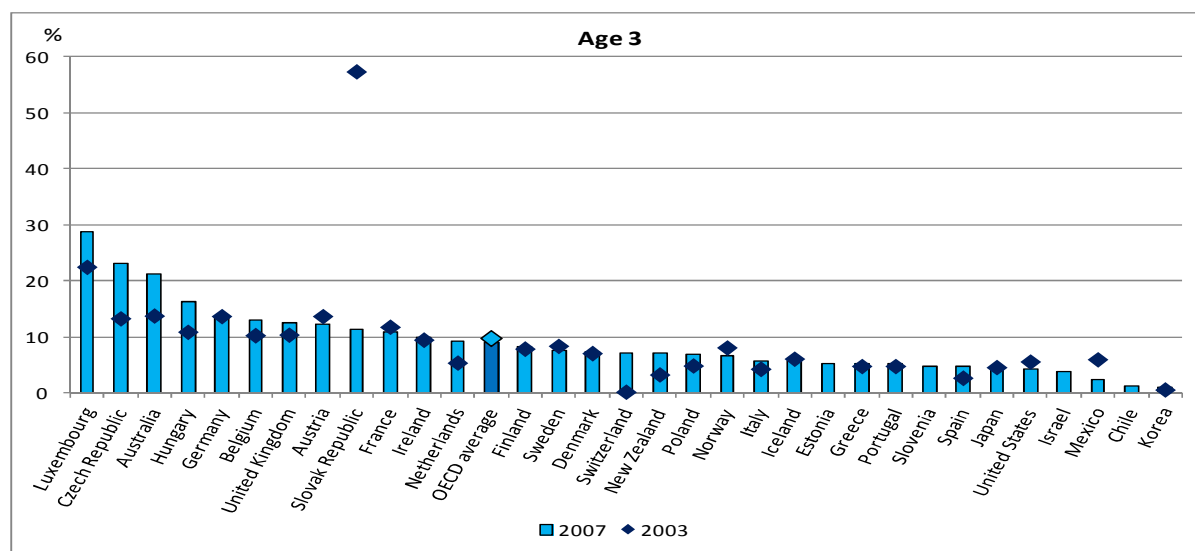


Note: Public support accounted here only concerns public support that is exclusively for families (e.g., child payments and allowances, parental leave benefits and child care support). Spending recorded in other social policy areas as health and housing support). Spending recorded in other social policy areas as health and housing support also assists families, but not exclusively, and is not included here. Data on tax breaks towards families is not available for Chile, Estonia, Greece, Hungary, Israel and Slovenia.

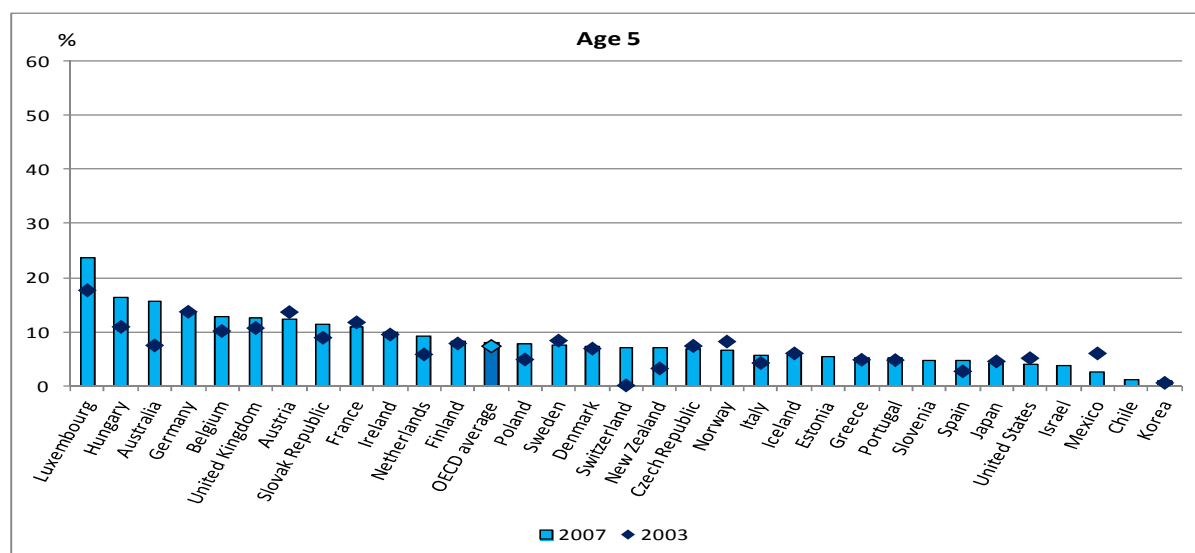
Source: OECD Social Expenditure Database (www.oecd.org/els/social/expenditure), 2010, and ESSPROS, 2010.

Figure C.6. Public spending on family benefits in cash and tax measures per child, % of median working-age household income (2003 and 2007)

Panel A. At age 3



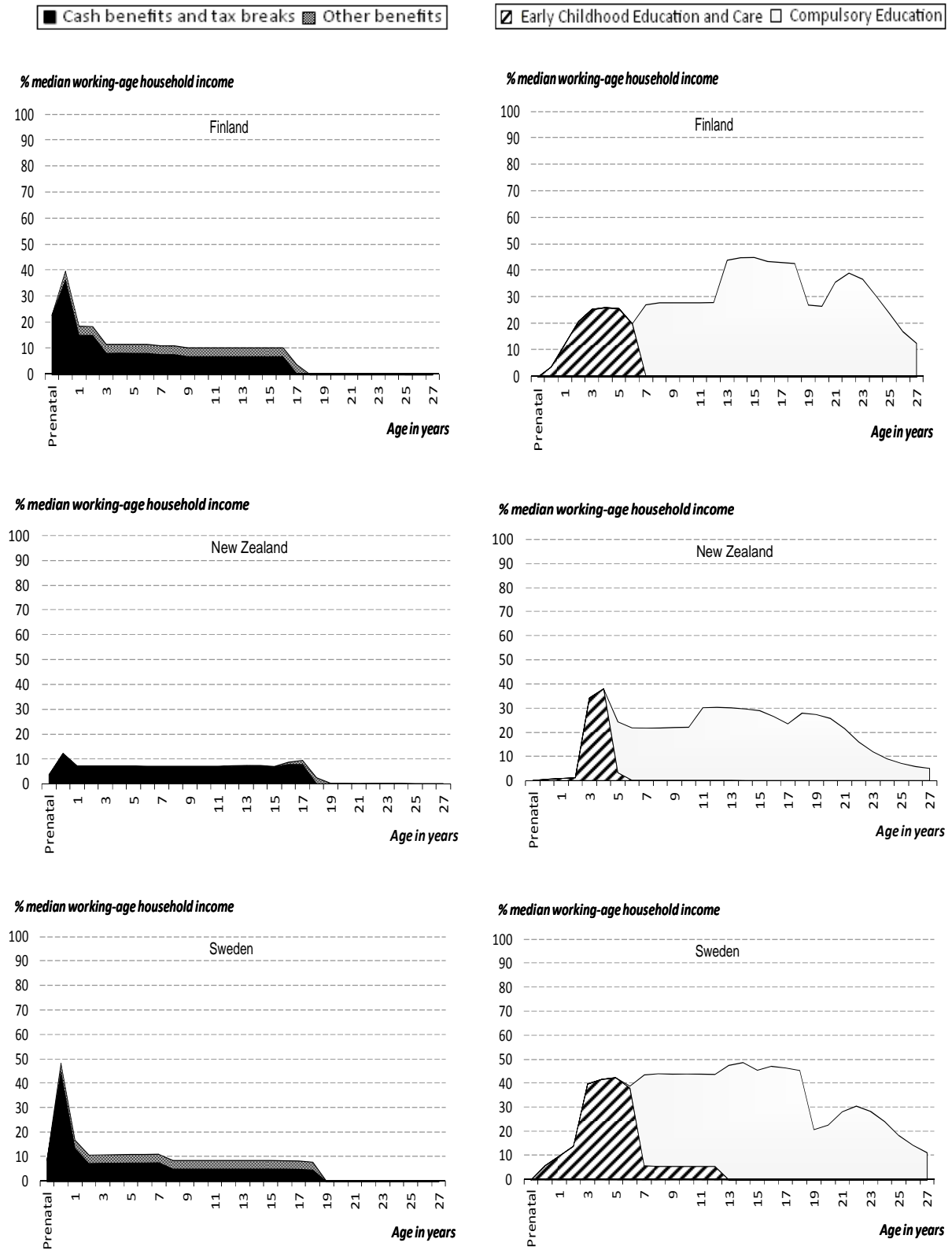
Panel B. At age 5



Source: OECD (2011), Doing Better for Families, OECD Publishing.

Figure C.7. Public spending on cash benefits and ECEC services per child

As a proportion of median working-age household income across different age groups, 2007



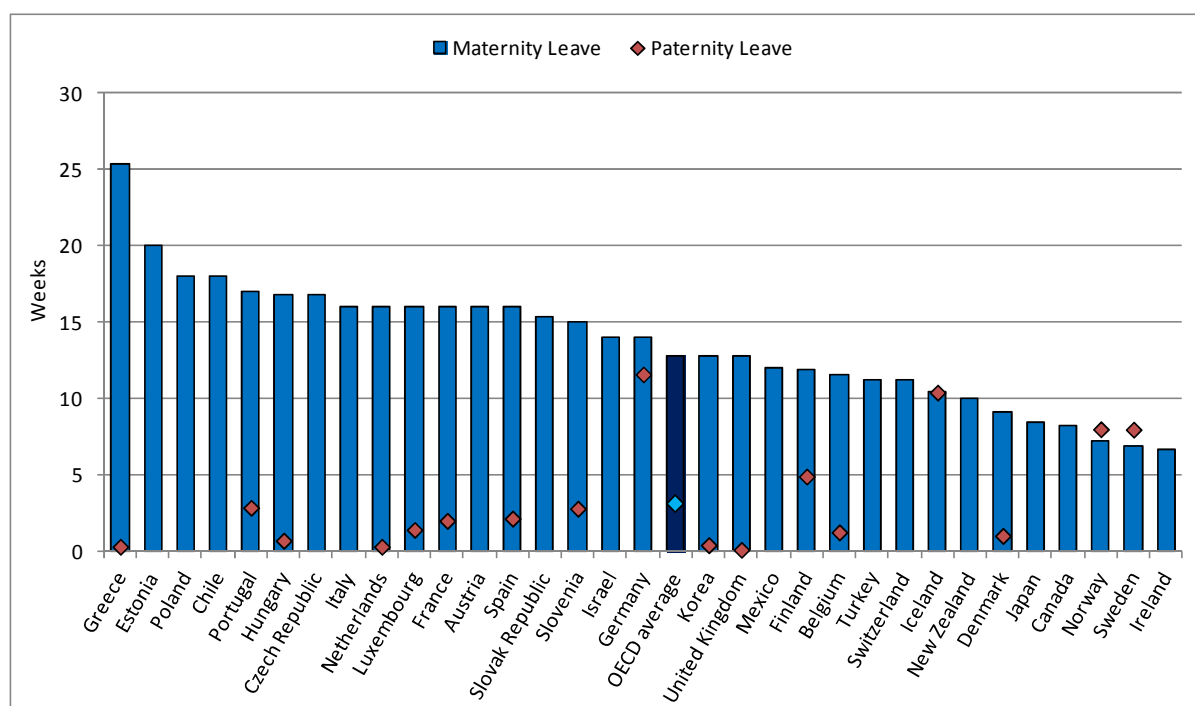
Source: OECD (2011), Doing Better for Families, OECD Publishing.

4 - 5. Paid maternity and paternity leave^{1,2}

- On average, mothers have a total of 12.8 weeks of maternity leave in the 34 OECD countries with a significant variation in length.
- Finland provides paid maternity leave for a period of 11.9 weeks, which is slightly below the OECD average. Mothers in New Zealand and Sweden also have a relatively short length of paid maternity leave, although unpaid maternity leave entitlement might be in place.
- On average, fathers have a total of 3.1 weeks of paternity leave, with a significant variation in length and considerably shorter periods than mothers do.
- Finland provides an above average length of paternity leave for a period of 4.9 weeks. Other Nordic countries like Sweden and Norway have longer paternity leave entitlements (8 weeks) than Finland.

Figure C.8. Child-related leave periods: Paid maternity and paternity leave in weeks

Entitled and expressed as a % of maternity/paternity leave at Full-Rate Equivalent (FRE) pay, 2007/08



Source: OECD Family database, May 2011.

6 - 7. Required ISCED levels for different types of ECEC staff

Figure C.9. Minimum required ISCED level for different types of ECEC staff

	Staff working for the care sector							
	Teaching staff working for the education sector or in an integrated system for care and education							
	Compulsory schooling							

Country	Age							
	0	1	2	3	4	5	6	7
Australia	Child care Worker (4) / Child care Manager (5)							
	Preschool/Kindergarten Teacher (5A)							
Austria	Kindergarten Pedagogue (4A)							
Belgium (Flemish Community)	Child care Worker in the care sector (3)							
		2.5y	Child care Worker in the education sector (3)					
		2.5y	Kindergarten teacher / Pedagogue (5B)					
Belgium (French Community)	Child care Worker (3)							
		2.5y	Pre-Primary Teacher (5)					
Canada (British Columbia)	Early childhood educator (3)							
						Kindergarten teacher (5A)		
Canada (Manitoba)	Early Childhood Educator (5B)							
						Kindergarten teacher (5)		
Canada (Prince Edward Island)	Family Day Carer (3) / Child carer in centre-based care (4)							
					Kindergarten teacher (4)			
Czech Republic	Child care Worker (3)				Pedagogue (3)			
Denmark	Pedagogue (5)							
Estonia		1.5y	Preschool pedagogue (5)					
Finland	Child care worker in kindergarten (2/3 of staff should have at least level 3)							
	Kindergarten Teacher (5B)						Pre-primary Teacher (5B)	
Germany	Child care worker (3)							
	Pedagogue (4A)							
	Pedagogue for childhood or social pedagogue (5)							
Hungary	Child care Worker (3)			Pedagogue (5)				
Ireland				Pre-primary Teacher (5)				
Israel	Child care Teacher (5)							
				Pre-Primary Teacher (5)				
Italy	Educator (child care centres) (5B)			Pre-primary teacher (6)				
Japan	Nursery Teacher (5B)							
				Kindergarten Teacher (5B)				
Korea	Child care Worker (3)							
				Pre-Primary Teacher (5)				
Luxembourg							Pre-Primary Teacher (Instituteur) / Educator (5B)	
Mexico	Indigenous ECEC Teacher (3)			Indigenous preschool Teacher (3)				
	ECE/Preschool Teacher (5)							
Netherlands	Child carer (centred child care) / Official Childminder (3)							
		Playgroup Leader (3)			Kindergarten/ primary school teacher(4)			until 12 y
New Zealand	Playcentre Leader (3)							
	Qualified Education and Care Teacher / Kindergarten Teacher (5B)							
	Teacher for pacific/indiginous children (Kaiako) (5B)							
Norway	Child/Youth Worker (3)							
	Pedagogical Leader (Kindergarten & Family Kindergarten) / Head Teacher (5A)							
Poland	Child care Worker (3)			Kindergarten teacher (5)				
Portugal	Preschool Teacher (5A)							
Slovak Republic	Nursery School Worker (3B)			Kindergarten Teacher (3)				
Slovenia	Family Day Carer (3)							
	Preschool teacher (5B)							
Spain	Early education teacher (5B)			Preschool teacher (5A)				
Sweden		Child minder (3)						
		Preschool teacher (5A)						
Turkey					Pre-Primary Teacher (5A)			
United Kingdom (Scotland)	Child care practitioners (5)							
				Preschool Teacher (5)				
United States (Georgia, Massachusetts, North Carolina, Oklahoma)				Preschool Teacher (5)				

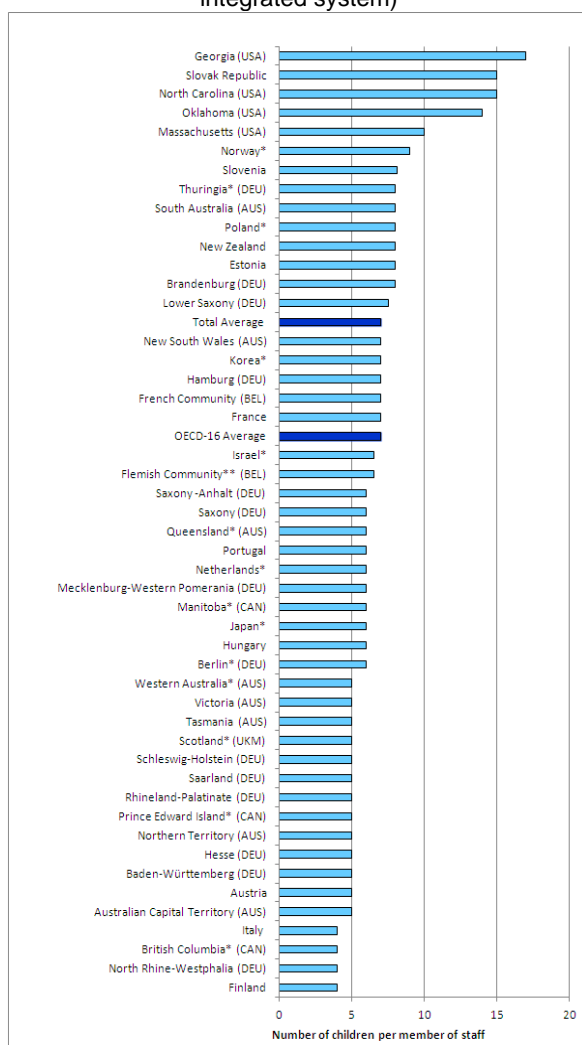
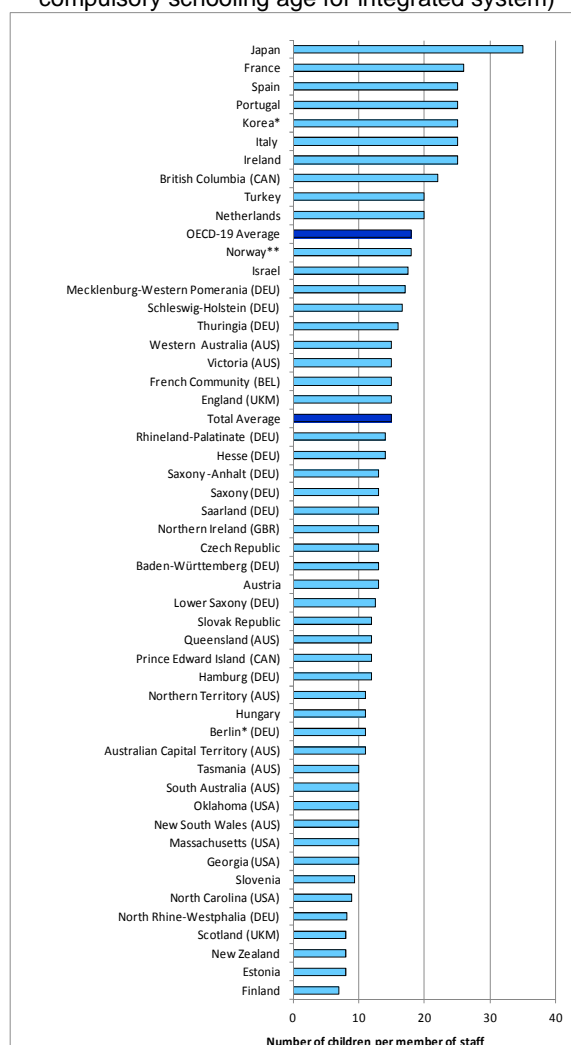
Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

8. Staff-to-child ratio in formal day care services for zero-to-three-year-olds

- Infants and toddlers need more intensive care than other young children. Therefore countries set different minimum standards for young children in ages zero to three than for older children in preschool. The average staff-to-child ratio for the zero-to-three-year-old age group is one caregiver looking after seven children in formal day care services.
- In Finland, a caregiver looks after the fewest children (four children per staff member) among OECD countries, which allows for more time for staff to interact with each young child.
- The ratio is higher in New Zealand with eight children per staff member. Sweden does not set a regulated minimum staff-child ratio, although the average staff-child ratio is 1:5.3 (Figure C.10, Panel A).

9. Staff-to-child ratio in kindergarten or preschool services for three-to-six-year-olds

- Regulated staff-child ratios in ECEC are often larger for older children, although the actual ratio can be better than the regulated ratio.
- On average, one preschool teacher is assigned to 15 children in preschool services, with significant variation across countries.
- Finland has the smallest staff-child ratio in preschool (seven children per staff member). New Zealand also has a small ratio with eight children per staff member. Again, Sweden does not have a regulated ratio in place although the average ratio is 16 children per preschool teacher in preschool class for six-year-olds (Figure C.10, Panel B).

Figure C.10. Child-to-staff ratio in ECEC services**Panel A. In child care (zero-to-three-year-olds for integrated system)****Panel B. In kindergarten or preschool (three years to compulsory schooling age for integrated system)**

* Jurisdictions with separate regulations for staff-child ratio for different age groups, the data given is based on: 3-6-year-olds attending for 5-7 hours per day regarding Berlin; and 4-year-olds regarding Korea.

** The figure for Norway applies only to qualified kindergarten teachers, whereas regulation stipulates that if other staff will also be present in the kindergarten setting, the number of children per member of staff is effectively lower. The figure for Norway is based on regulation for 3-6-year-olds.

* Jurisdictions with separate regulations for different age groups, the data given is based on: Berlin (DEU), 2-3-year-olds (attending 5-7 hours per day); British Columbia (CAN), 0-3-year-olds; Israel, 2-3-year-olds; Japan, 1-2-year-olds (while the country has different ratios in place for different ages: the ratio for age 0 is 1:3; age 1-2, 1:6; age 3, 1:20; and age 4, 1:30 – only data regarding 1-2-year-olds is included in the figure); Korea, 2-year-olds; Manitoba (CAN), 2-3-year-olds; Netherlands, 2-3-year-olds; Norway, 0-3-year-olds; Prince Edward Island (CAN), 2-3-year-olds; Queensland (AUS) 2-3-year-olds; Scotland (UKM), 2-3-year-olds; Thuringia (DEU), 2-3-year-olds; Western Australia (AUS), 2-3-year-olds. For Poland, when there is a disabled child in the playroom, the ratio is set at 1:5.

**Subsidised facilities only

Note: The Total Average is based on data for all countries and jurisdictions included in the respective figures.

Note on Panel A: OECD-19 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Czech Republic, Estonia, Finland, France, Hungary, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain and Turkey.

Note on Panel B: OECD-16 Average is only based on data reported for OECD countries, excluding regions and territories, and is calculated based on data from: Austria, Estonia, Finland, France, Hungary, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic and Slovenia.

Source: OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

NOTES

- 1 Maternity Leave (or pregnancy leave): employment-protected leave of absence for employed women at around the time of childbirth, or adoption in some countries. The ILO convention on maternity leave stipulates the period of leave to be at least 14 weeks. In most countries beneficiaries may combine pre- with post-birth leave; in some countries a short period of pre-birth leave is compulsory as is a 6 to 10 week leave period following birth. Almost all OECD countries have public income support payments that are tied to taking maternity leave. In some countries (Germany, Iceland, Norway and Sweden), there is no separate regulation for maternity leave with stipulations integrated into the parental leave scheme.
- 2 Paternity Leave: employment-protected leave of absence for employed fathers at the time of childbirth. Paternity leave is not stipulated by international convention. Periods of paternity leave are much shorter than for maternity leave. Because of the short period of absence, workers on paternity leave often continue to receive full wage payments. In some countries, father specific leave entitlement is part of the parental leave scheme, rather than established as a separate right.

ANNEX D. NOTES TO THE SPIDER WEBS

Table D.1. Overview of available indicators per country: Policy outcomes

Country	Fertility	Enrolment in formal care for children under age 3	Enrolment rates at age 3	Enrolment rates at age 5	PISA Reading/ Maths/ Science	Healthy weight rates among 15 year-olds	Children under age 18 above poverty line	School continuing survival	People aged 15-19 who were in education or work	Maternal employment rates, age of youngest child under 3 years	Maternal employment rates, age of youngest child 3-5 years	Gender equality in median earnings of full-time employees
Australia	X	X	X	X	X	m	X	m	X	m	X	X
Austria	X	X	X	X	X	X	X	X	X	X	X	X
Belgium	X	X	X	X	X	X	X	X	X	X	X	X
Canada	X	X	m	m	X	X	X	m	X	X	X	X
Chile	X	X	X	X	X	m	X	m	m	m	m	m
Czech Republic	X	X	X	X	X	X	X	X	X	X	X	X
Denmark	X	X	X	X	X	X	X	X	X	X	X	X
Estonia	X	X	X	X	X	X	X	m	X	X	X	m
Finland	X	X	X	X	X	X	X	X	X	X	X	X
France	X	X	X	X	X	X	X	X	X	X	X	X
Germany	X	X	X	X	X	X	X	X	X	X	X	X
Greece	X	X	m	X	X	X	X	X	X	X	X	X
Hungary	X	X	X	X	X	X	X	X	X	X	X	X
Iceland	X	X	X	X	X	X	X	X	X	m	X	X
Ireland	X	X	X	X	X	X	X	X	X	X	X	X
Israel	X	X	X	X	X	m	X	m	X	m	m	m
Italy	X	X	X	X	X	X	X	X	X	X	X	X
Japan	X	X	X	X	X	m	X	m	X	X	X	X
Korea	X	X	X	X	X	m	X	m	m	m	m	X
Luxembourg	X	X	X	X	X	X	X	X	X	X	X	m
Mexico	X	X	X	X	X	m	X	m	X	m	m	m
Netherlands	X	X	X	X	X	X	X	X	X	X	X	X
New Zealand	X	X	X	X	X	m	X	m	X	X	X	X
Norway	X	X	X	X	X	X	X	X	X	m	m	X
Poland	X	X	X	X	X	X	X	X	X	X	X	X
Portugal	X	X	X	X	X	X	X	X	X	X	X	X
Slovak Republic	X	X	X	X	X	X	X	X	X	X	X	m
Slovenia	X	X	X	X	X	X	X	X	X	X	X	m
Spain	X	X	X	X	X	X	X	X	X	X	X	X
Sweden	X	X	X	X	X	X	X	X	X	X	X	X
Switzerland	X	m	X	X	X	X	X	m	X	X	X	X
Turkey	X	m	X	X	X	X	X	X	X	X	X	m
United Kingdom	X	X	X	X	X	X	X	X	X	X	X	X
United States	X	X	X	X	X	X	X	m	X	X	X	X

Note: The table shows the availability of the indicators for each country; “m” is for missing and “x” for available.

Table D.2. Overview of available indicators per country: Policy inputs

Country	Public child care and education expenditure at age 3	Public child care and education expenditure at age 5	Public spending on family benefits in cash and tax measures	FTE paid maternity leave	FTE paid paternity leave	Required ISCED levels for staff at the care sector	Required ISCED levels for teaching staff at the education sector	Staff-to-child ratio in child care for 0-to-3-year-olds	Staff-to-child ratio in kindergarten/pre-school services for 3-to-6-year-olds
Australia	X	X	X	X	m	X	X	X	X
Austria	X	X	X	X	X	m	X	X	X
Belgium	X	X	X	X	X	X	X	X	X
Canada	m	m	X	X	m	m	m	X	X
Chile	X	X	X	m	X	m	m	m	m
Czech Republic	X	X	X	X	m	X	X	m	X
Denmark	X	X	X	X	X	m	X	m	m
Estonia	X	X	X	X	X	m	X	X	X
Finland	X	X	X	X	X	X	X	X	X
France	X	X	X	X	X	m	m	X	X
Germany	X	X	X	X	X	X	X	X	X
Greece	X	X	X	X	X	m	m	m	m
Hungary	X	X	X	X	X	X	X	X	X
Iceland	X	X	X	X	X	m	m	m	m
Ireland	X	X	X	X	X	m	X	m	X
Israel	X	X	X	X	m	X	X	X	X
Italy	X	X	X	X	m	X	X	X	X
Japan	X	X	X	X	m	X	X	X	X
Korea	X	X	X	X	X	X	X	X	X
Luxembourg	X	X	X	X	X	m	X	m	m
Mexico	X	X	X	X	m	X	X	m	m
Netherlands	X	X	X	X	X	X	X	X	X
New Zealand	X	X	X	X	m	X	X	X	X
Norway	X	X	X	X	X	X	X	X	X
Poland	X	X	X	X	X	X	X	X	m
Portugal	X	X	X	X	X	m	X	X	X
Slovak Republic	X	X	X	X	m	X	X	X	X
Slovenia	X	X	X	X	X	X	X	X	X
Spain	X	X	X	X	X	X	X	m	X
Sweden	X	X	X	X	X	X	X	m	m
Switzerland	X	X	X	X	m	m	m	m	m
Turkey	m	m	m	X	m	m	X	m	X
United Kingdom	X	X	X	X	X	X	X	X	X
United States	X	X	X	X	m	m	X	X	X

Note: The table shows the availability of the indicators for each country; “m” is for missing and “x” for available.

ANNEX E. METHODOLOGY AND DATA SOURCES FOR THE SPIDER WEBS

Table E.1. Spider web methodological notes and data sources: Policy outcomes

Indicator	Notes	Source
Fertility	Year 2009 or latest available year. 2007 for Belgium and Canada; 2008 for Australia, Germany, Greece, and Iceland.	National Statistical Offices, 2010, and Eurostat Demographic Statistics, 2010. (OECD Family database, 2011).
Enrolment in formal care for the under 3s	Year 2008.	For children 0-2: Australia, ABS Childcare service (2008); Canada, National Longitudinal Survey of Children and Youth (2008); Japan, Statistical Report on Social Welfare Administration and Services (2008); New Zealand, Education Counts' statistics (2008); the US, Early Childhood Program Participation Survey (2005); European countries, EU-SILC (2008) except Germany: administrative data; Nordic countries: NOSOSCO (2007-08); Other: National Authorities. For children 3-5: OECD Education database; Canada, National Longitudinal Survey of Children and Youth (2008); Korea, Ministry of Health and Welfare (2010), and Eurostat (2008) for non-OECD countries.
Enrolment rates at age 3 and 5	Year 2009. At age 3, OECD does not include Greece and Canada.	OECD Education Database, November 2011. Data for Korea come from National Sources for Year 2010.
PISA Reading, Mathematics and Science	Year 2009. PISA: Programme for International Student Assessment.	OECD, PISA 2009 Database.
Healthy weight rates among 15 year-olds	Year 2006. Healthy weight rates are calculated as the inverse of overweight rates - BMI equal or greater than 25. For Ireland, 30% or more of missing data.	Health Behaviour in School-aged Children 2005/2006. (OECD Family database, 2011).
Children under 18 above poverty line	Data refer to 2006 for Japan; 2007 for Denmark and Hungary; 2009 for Chile. Children <18 above poverty line reports the inverse of poverty for children <18.	OECD (2011) OECD Income distribution questionnaire, version October 2011, for OECD countries; EU-SILC 2009 for non-OECD countries

Table E.1. Spider web methodological notes and data sources: Policy outcomes (continued)

Indicator	Notes	Source
School continuing survival	<p>Year 2007.</p> <p>School continuing survival represents the inverse of the early school leaver indicator.</p> <p>Students living abroad for one year or more and conscripts on compulsory military service are not covered by the EU Labour Force Survey, which may imply higher rates than those available at national level. The indicator covers non-nationals who have stayed or intend to stay in the country for one year or more. Czech Republic; data from 2006; France: overseas departments (DOM) are not covered.</p>	<p>Eurostat database (data extracted September 2009) from Eurydice & European Commission, Gender differences in Educational Outcomes: study on the measures taken and the current situation in Europe, EC, December 2009.</p>
People aged 15-19 who were in education or work	<p>Year 2008.</p> <p>2006 instead of 2008 for Iceland and 2004 for Mexico. Youth aged 15-24 for Japan.</p>	<p>OECD Education database, 2010.</p>
Maternal employment rates, age of youngest child under 3 years	<p>Year 2008 or latest available year.</p> <p>2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark.</p>	<p>European Labour Force Surveys (2007-08) for EU countries; Australia: Australian Bureau of Statistics (2005); Canada: Statistics Canada (2001); Denmark: Statistics Denmark (1999); Iceland: Statistics Iceland (2002 for women age 25-54); Japan: Japanese national census (2005); Mexico: Encuesta Nacional de la Dinamica Demografica 2006; Switzerland: Swiss LFS (2006); United States: US Current population survey (2005). (OECD Family Database, 2011).</p>
Maternal employment rates, age of youngest child 3-5 years	<p>Year 2008 or latest available year.</p> <p>2007 for Sweden; 2006 for Mexico and Switzerland; 2005 for Australia, Japan, New Zealand and the United States; 2002 for Iceland; 2001 for Canada; 1999 for Denmark.</p> <p>For 3-5 years, data for Australia and Iceland refer to mothers with a youngest child aged less than 5.</p>	<p>European Labour Force Surveys (2007-08) for EU countries; Australia: Australian Bureau of Statistics (2005); Canada: Statistics Canada (2001); Denmark: Statistics Denmark (1999); Iceland: Statistics Iceland (2002 for women age 25-54); Japan: Japanese national census (2005); Mexico: Encuesta Nacional de la Dinamica Demografica 2006; Switzerland: Swiss LFS (2006); United States: US Current population survey (2005). (OECD Family Database, 2011).</p>
Gender equality in median earnings of full-time employees	<p>Year 2008 or latest available year.</p> <p>Data refer to 2005 for the Netherlands and to 2007 for Belgium and France.</p> <p>The gender wage gap is unadjusted and is calculated as the difference between median earnings of men and women relative to median earnings of men.</p> <p>Estimate of earnings used in the calculations refer to gross earnings of full-time wage and salary workers. However, this definition may slightly vary from one country to another.</p>	<p>OECD (2010), Employment Outlook. (OECD Family Database, May 2011).</p>

Table E.2. Spider web methodological notes and data sources: Policy inputs

Indicator	Notes	Source
Public child care and education expenditure at age 3 and 5 (% of median working-age household income)	Year 2007.	OECD (2011), <i>Doing Better for Families</i> , OECD Publishing.
Public spending on family benefits in cash and tax measures	<p>Year 2007.</p> <p>Public support accounted here only concerns public support that is exclusively for families (e.g., child payments and allowances, parental leave benefits and child care support). Spending recorded in other social policy areas as health and housing support). Spending recorded in other social policy areas as health and housing support also assists families, but not exclusively, and is not included here.</p> <p>Tax breaks towards families not available for Chile, Estonia, Greece, Hungary, Israel and Slovenia.</p>	Social Expenditure Database (www.oecd.org/els/social/expenditure), 2010, and ESSPROS, 2010. (OECD Family database, 2011).
FTE (Full Time Equivalent) paid maternity/paternity leave	<p>Year 2006/07.</p> <p>Information refers to the entitlement for paternity leave in a strict sense and the father quota included in some parental leave regulations (for example, Finland and Iceland). In Finland, the 7 weeks include 3 weeks of standard paternity leave, plus 2 weeks of parental leave that give rights to additional 2 weeks of paternity leave. The individual is assumed to take 26 weeks of parental leave and a remaining period of 130 weeks of child care leave over which home care allowance can be received.</p>	Moss, P. and M. Korintus (2008), International Review of leave Policies and related research, DTI Employment Relations Research Series, No. 100; Missoc tables: Social Protection in EU Member States; OECD Babies and Bosses (various issues) or information provided by National authorities in non EU countries. (OECD Family database, 2011).
Required ISCED levels for staff at the care sector or education sector		OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.
Staff-to-child ratio in child care for 0-to-3-year-olds/ in kindergarten/ preschool services average for 3-to-6-year-olds	Countries who reported averages for staff-child ratio instead of a minimum requirement in the Survey have not been included in the graphs, as averages do not constitute a regulated <u>minimum</u> requirement. When regulated ratios were indicated as maximum number per children per multiple staff members (e.g., 2:15), the number included in the figure has been calculated based on the maximum number of children for one member of staff (e.g., 2:15 has been re-calculated into 1:7.5). The Total Average is based on data for all countries and jurisdictions included in the respective figures.	OECD Network on Early Childhood Education and Care's "Survey for the Quality Toolbox and ECEC Portal", June 2011.

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Quality Matters in Early Childhood Education and Care

FINLAND

Early childhood education and care (ECEC) can bring a wide range of benefits – for children, parents and society at large. However, these benefits are conditional on “quality”. Expanding access to services without attention to quality will not deliver good outcomes for children or long-term productivity benefits for society.

This series of country reports focuses on quality issues. Each report tackles a specific theme that was selected by the country reviewed. These reports suggest strengths and point to areas for further reflection on current policy initiatives.

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Chapter 1. Where does Finland stand regarding policy outcomes and inputs?

Chapter 2. What does research say?

Chapter 3. Where does Finland stand compared to other countries?

Chapter 4. What are the challenges and strategies?

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